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USAAVLABS TECHNICAL REPORT 66-58

CH-54A SKYCRANE HELICOPTER FLIGHT LOADS INVESTIGATION PROGRAM

Engineering Laboratory Report

June 1966

By

Joseph F. Braun

F. Joseph Giessler

TECHNOLOGY INCORPORATED

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**Task 1P125901A14607
House Task EL 65-15
USAAVLABS Technical Report 66-58
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SUMMARY

The United States Army Aviation Materiel Laboratories, Fort Eustis, Virginia, has conducted a flight loads investigation program for several operational aircraft. The aircraft involved in the program were the OV-1A, CH-47A, UH-1B, and CH-54A. This report deals only with the analysis of the 110.4 hours of CH-54A Skycrane data. Century 409B oscillograph recorders were used to collect the parameters measured, including airspeed, altitude, vertical acceleration at center of gravity, main rotor rpm, longitudinal cyclic stick position, collective stick position, outside air temperature, torque on each engine, and gas producer rpm on each engine. Barometric pressure and takeoff-and-landing gross weight estimates were also recorded as supplemental information. The flight data were divided into four categories by mission: ascent, maneuver, descent, and steady state. The aircraft were performing their normal mission functions during the period in which the data were collected.

Time history tables, histograms, peak counts, and exceedance curves were generated from the data. As a result of this study, designers now have a limited sample of conditions experienced by four CH-54A aircraft in the field.

FOREWORD

The material presented in this report is the result of a joint endeavor by the United States Army Aviation Materiel Laboratories (USAAVLABS), Fort Eustis, Virginia, and Technology Incorporated, Dayton, Ohio. The program was sponsored by the Aeromechanics Division and was performed by the Engineering Laboratories Division of USAAVLABS, and the data were collected and reduced by Technology Incorporated.

The authors express appreciation to Mr. Cyril G. Peckham, Mr. John F. Nash, Mr. Larry E. Clay, Mr. Howard I. Ackerman, Mr. William E. Morrin, and Mr. Ronald I. Rockafellow, all of Technology Incorporated, for their contributions to this report.

Special acknowledgement is given to Dr. R. G. Loewy, who served as consultant to the program.

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SYMBOLS

Computer Equivalent

C_T	thrust coefficient	CT
g	acceleration due to gravity, 32.174 ft/sec ²	
h_d	density altitude, ft	
n_z	normal load factor, g	NZ
OAT	outside air temperature, °F	
P	atmospheric pressure, inches of mercury	
R	rotor radius = 36.0 ft	
RPM	rotor revolutions per minute	
V	indicated airspeed, ft/sec	
W	gross weight, lb	
Δn_z	incremental load factor = $n_z - 1.0$	
μ	rotor tip speed ratio	MU
ρ	local atmospheric density, slugs/ft ³	
ρ_o	sea level density = .0023799 slug/ft ³	
σ	rotor solidity = 0.08649	S
Ω	rotor angular velocity, radians/sec	

INTRODUCTION

The United States Army Aviation Materiel Laboratories (USAAVLABS) is engaged in basic research involving the adequacy of structures of U. S. Army aircraft. It was necessary to begin a flight loads investigation program in order to provide designers with the load spectra experienced by operational aircraft. USAAVLABS conducted this task as an in-house effort for CH-54A aircraft which were performing routine mission assignments in the Fort Benning, Georgia, area.

The operational characteristics of the CH-54A were analyzed in the 110.4-hour statistical sample of data compiled in this report. Parameters measured included airspeed, altitude, outside air temperature, vertical acceleration at the center of gravity, main rotor rpm, collective stick position, longitudinal cyclic stick position, engine torque of each engine, and gas producer rpm of each engine. Supplementary information for each flight consisted of gross weight estimates, type of mission, and barometric pressure. Airborne oscillographic recorder systems were utilized to obtain the data.

The data from each flight were classified as belonging to one of the following four mission segments: ascent, descent, maneuvering, or steady state. By grouping and correlating the various parameters with the supplemental information collected, it was possible to generate exceedance curves, histograms, and gust spectra to provide preliminary guidelines for aircraft design.

The original goal of 200 flight hours of operational data was not met because the instrumented aircraft were sent to the Republic of Vietnam before the completion of the data-gathering program.

OBJECTIVES

The primary objectives of this program were:

1. To provide a minimum statistical sample of operational data for establishing design criteria for future heavy-lift helicopters.
2. To present this information in a convenient form for use by aircraft designers.
3. To perform limited preliminary analyses of these results.

METHOD

DATA RECORDING

Three CH-54A helicopters were instrumented during the present program. These helicopters were assigned to the 478th Flying Crane Company stationed at Fort Benning, Georgia. Instrumentation began on 25 January 1965, and data recording began on 4 February 1965. The recording was completed on 27 July 1965. A total of 110.38 hours of usable data from 409 flights was recorded on a Century Type 409B oscillograph. A block diagram of the complete instrumentation system is shown in Figure 1. The following parameters were recorded: airspeed, altitude, vertical C. G. acceleration, outside air temperature, main rotor speed, collective stick position, longitudinal cyclic stick position, engine torque (two engines), and gas producer rpm (two engines).

DATA PROCESSING

Data Editing and Reading

The editing and reading of the data presented in this report were done by personnel of the U. S. Army Aviation Materiel Laboratories. In order to explain some of the forms of data presentation, a few editing and reading comments are in order.

The flight records are divided into four mission segments:

- Mission Segment 1 - Takeoff and Ascent
- Mission Segment 2 - Maneuver
- Mission Segment 3 - Descent, Flare, and Landing
- Mission Segment 4 - Steady State.

The first three mission segments are transient flight conditions during which there were no obvious steady values of the stick positions. Mission Segment 1 includes all takeoff times and other times during which the helicopter performed an unsteady ascent. Mission Segment 2 includes all unsteady flights falling in neither Mission Segment 1 nor

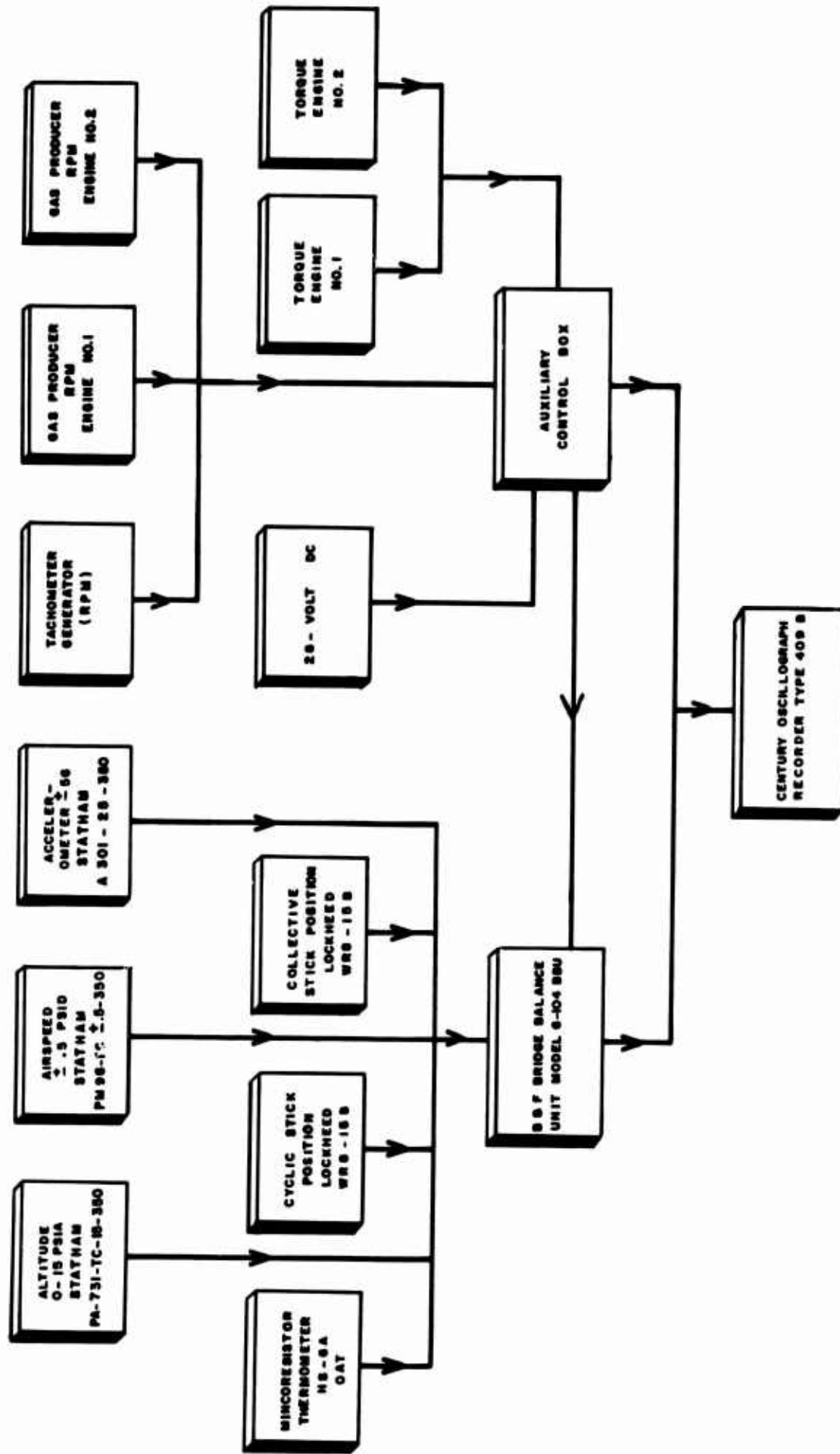


Figure 1. CH-54A Data System Block Diagram; Complete Instrumentation System.

Mission Segment 3. Mission Segment 3 includes all landings and all unsteady descents. Mission Segment 4 includes all flight time during which the stick positions were relatively steady and during which the airspeed and altitude were steady or changing smoothly.

The peaks of the normal acceleration, determined from the stick position trace, are identified as either gust-induced or maneuver-induced. If the n_z peak was preceded by motion of either or both sticks, it was considered to be maneuver-induced. If the peak was not preceded by stick motion, or if the stick motions were not in the correct direction to produce the acceleration observed, the peak was defined as a gust. A peak was determined when the load factor trace rose and fell by 50 percent of the peak value or by 0.2g, whichever was greater. Also, the peak value must be outside the threshold. The threshold for load factor peaks is 0.8 to 1.2g factors.

Peaks of the longitudinal cyclic and collective sticks are also presented. These were defined as a rise or fall of 10 percent of full-stick travel with the peak at least 10 percent above or below the normal values. The normal stick positions for steady state were the actual normal positions observed; those for the transient section were specified for each aircraft.

Time histories of the recorded parameters were retained only during the steady-state portion of the flight. During the transient portions, only the peak values were recorded, with no time history maintained.

Quality Control

The data presented in this report were edited, read, and quality-checked by the U. S. Army Aviation Materiel Laboratories, and each record was rechecked in the Quality Control Section at Technology Incorporated. The mean deviations and standard deviations were computed from the sample points obtained during the quality control check. If the reading errors are assumed to be normally distributed, then plus or minus three standard deviations from the true values should include 99.7 percent of the readings. The mean deviation and three standard deviations are shown in Table I for each parameter.

TABLE I
Quality Control Values for Each Parameter

Parameter	Mean Deviation	Three Standard Deviations
Airspeed, kn*	-.2	±2.0
Altitude, ft**	-4.5	±57
n_z , g	-.0008	±.06
Rotor rpm	-.2	±2.4
Long. cyclic stick, pct	-.02	±4.3
Collective stick, pct	-.02	±3.1
*Computed at 120 knots indicated airspeed		
**Computed at 1000-foot density altitude and standard temperature		

Data Computations

The data obtained from the reading of the flight records were used in the preparation of most figures and tables. However, certain derived parameters indicative of helicopter performance were calculated from the data and are also presented in this report.

The normal load factor, n_z , was reduced to an incremental normal load factor, Δn_z , for ease in presenting both positive and negative peaks, using the relation

$$\Delta n_z = n_z - 1.0. \quad (1)$$

In order to provide a means of comparing helicopter performance data, the density altitude, h_d , was calculated from the static pressure and the outside air temperature, OAT, from the relation

$$h_d = 145,300 \left[1 - \left(\frac{518.4 P}{29.92 \text{ OAT} + 13,745.2} \right)^{0.235} \right], \quad (2)$$

where P = atmospheric pressure, inches of mercury.

Two nondimensional parameters were also calculated. The rotor tip speed ratio was determined from the relation

$$\mu = \frac{V}{\Omega R}, \quad (3)$$

which for the CH-54A reduced to

$$\mu = 0.4477 \frac{V}{\text{RPM}}, \quad (4)$$

where

V = indicated airspeed in knots.

Ω = rotor angular velocity in radians per second.

R = rotor radius, 36.0 feet.

RPM = rotor revolutions per minute.

The thrust coefficient divided by the rotor solidity $\frac{C_T}{\sigma}$ was calculated from the relation

$$\frac{C_T}{\sigma} = .0001998 \frac{W}{(\text{RPM})^2 (\rho)}, \quad (5)$$

where

W = gross weight in pounds.

RPM = rotor revolutions per minute.

σ = rotor solidity, 0.08649.

ρ = local atmospheric density.

RESULTS

DATA PRESENTATION

The 110.38 hours of usable recorded data were obtained from 409 flights and 200 engine starts.

The data are presented as a set of time history tables, histograms, peak counts, and exceedance curves. The time history tables and histograms show the flight time spent in various ranges of one parameter versus flight time spent in ranges of a second parameter. Certain tables have also been broken down into ranges of a third or fourth parameter which remains constant for any particular sub-table. The times shown are steady-state times except Table II, which indicates total time (see the appendix). The peak count tables present the number of peaks of one parameter within given ranges which also fall within ranges of a second parameter. The ranges of a third or fourth parameter may also be used to modify certain tables.

Figure 2 shows the percentages of total recorded time in each mission. The small percentage of time spent in the maneuver segment is representative of a large helicopter. Figures 3(a) through 3(f) show the time spent in each mission segment by gross weight ranges. These plots are very similar, which would indicate that gross weight has very little, if any, influence on the distribution of time among the mission segments.

Parameters directly related to engine performance, that is, torque and gas producer rpm, were not tabulated for this report.

Time in the gross weight ranges is shown in Figure 4. Over one-third of the steady-state time was recorded between 26,000 and 30,000 pounds. The time at weights above 42,000 pounds came primarily from demonstration flights. A maximum weight of 46,222 pounds was recorded, consisting of a payload of 72 troops at approximately 200 pounds per man and a 3,600-pound troop-and-cargo van.

The percentage of steady-state time spent in altitude ranges is shown in Figure 5. The helicopter was operated at low density altitudes, with only 3-1/2 percent of the time spent above a 5,000-foot density altitude.

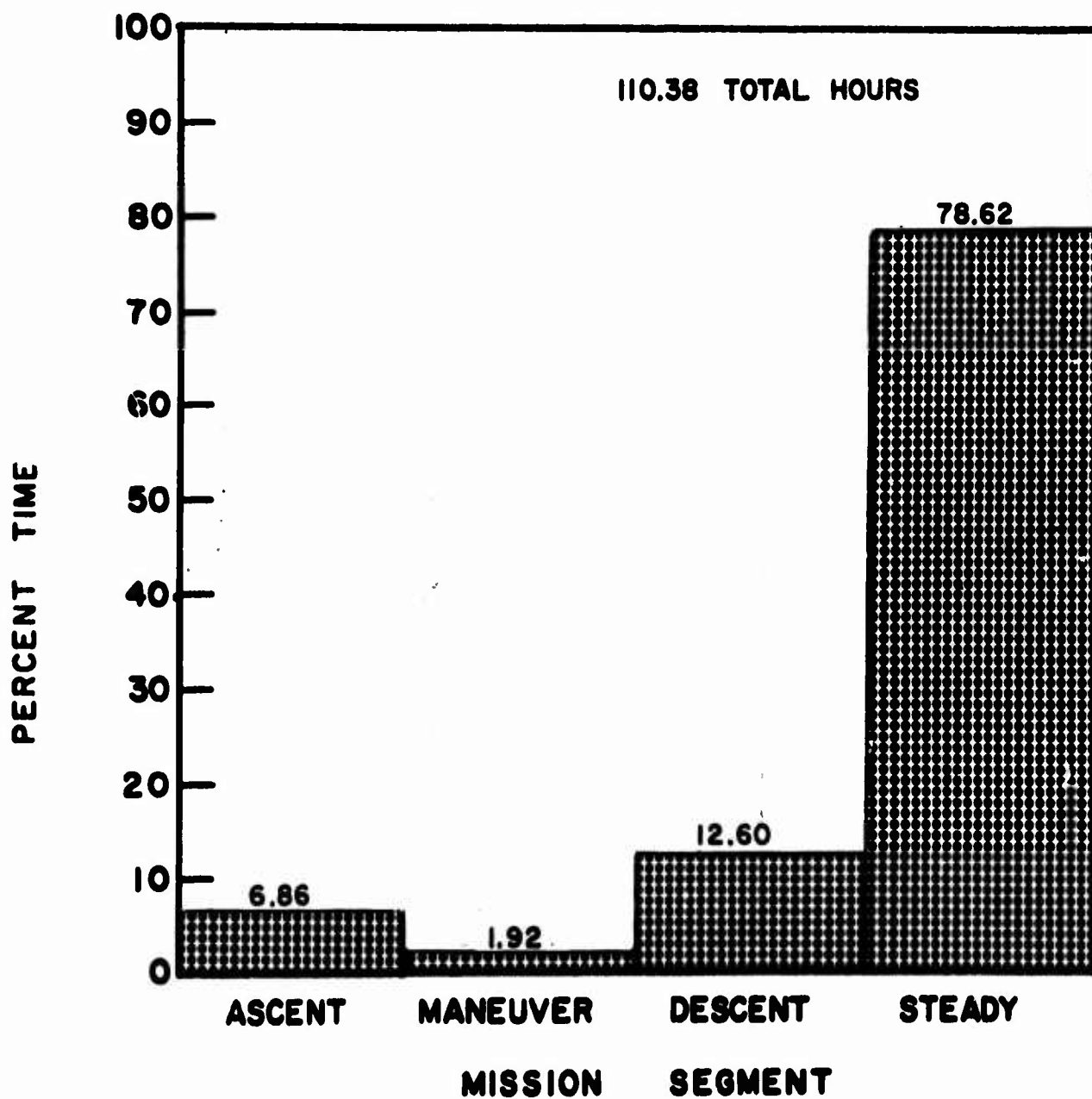
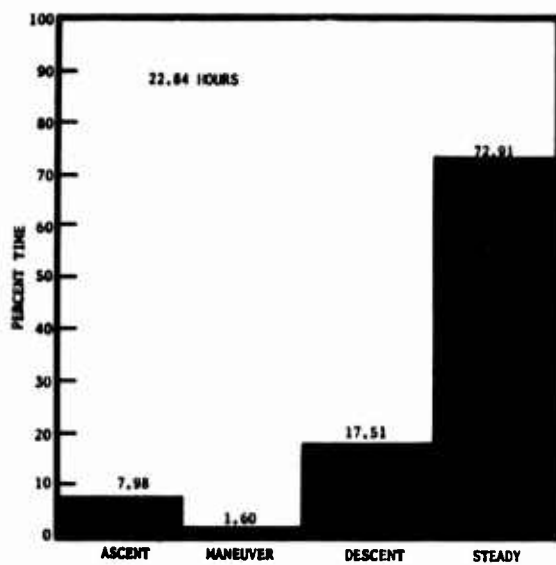
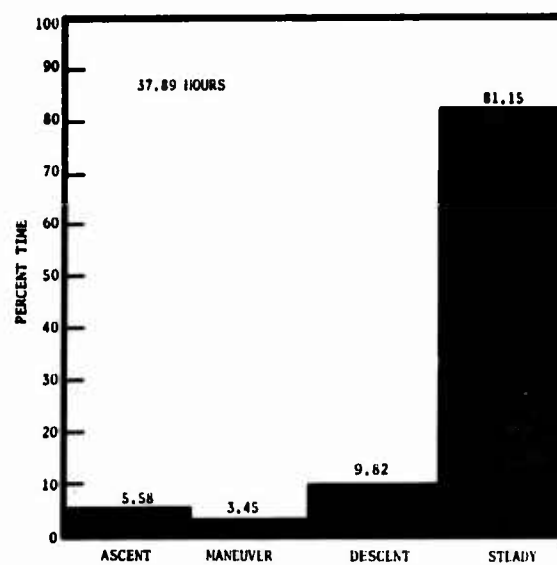


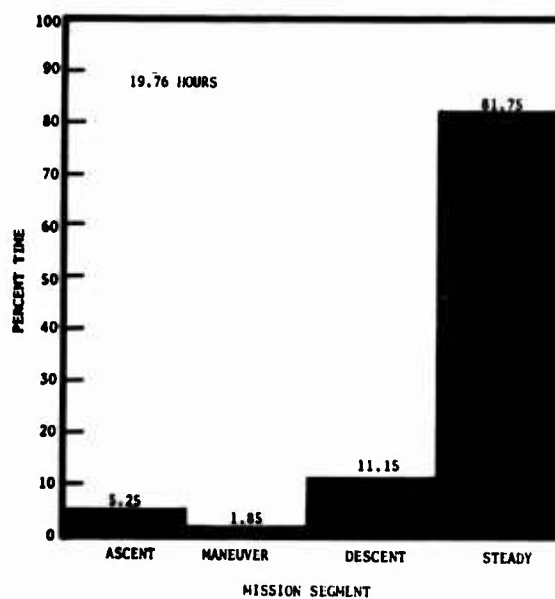
Figure 2. Percentage of Total Flight Time in Each Mission Segment.



(a) GROSS WEIGHT LESS THAN 26,000 POUNDS.

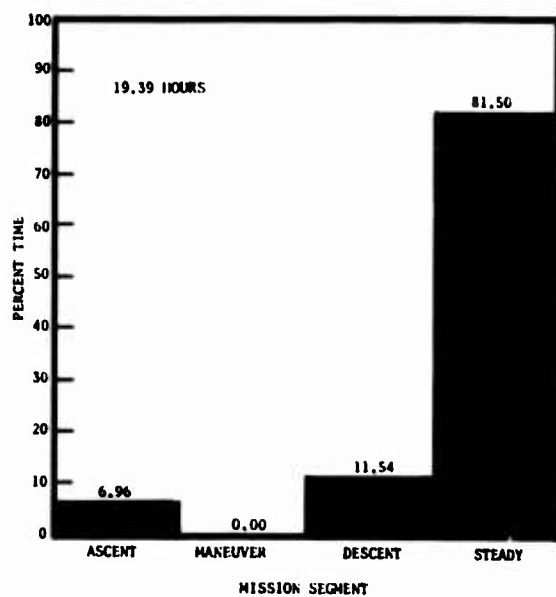


(b) GROSS WEIGHT 26,000 TO 30,000 POUNDS.

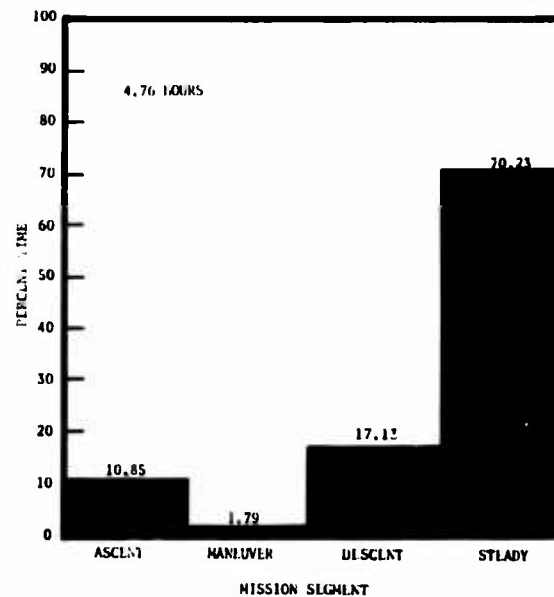


(c) GROSS WEIGHT 30,000 TO 34,000 POUNDS.

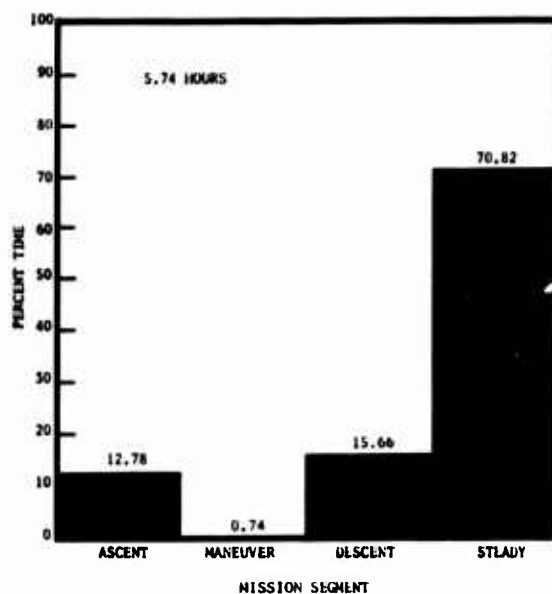
Figure 3. Time in Each Gross Weight Range Broken Down by Percentage in Each Mission Segment.



(d) GROSS WEIGHT 34,000 TO 38,000 POUNDS.



(e) GROSS WEIGHT 38,000 TO 42,000 POUNDS.



(f) GROSS WEIGHT OVER 42,000 POUNDS.

Figure 3, contd.

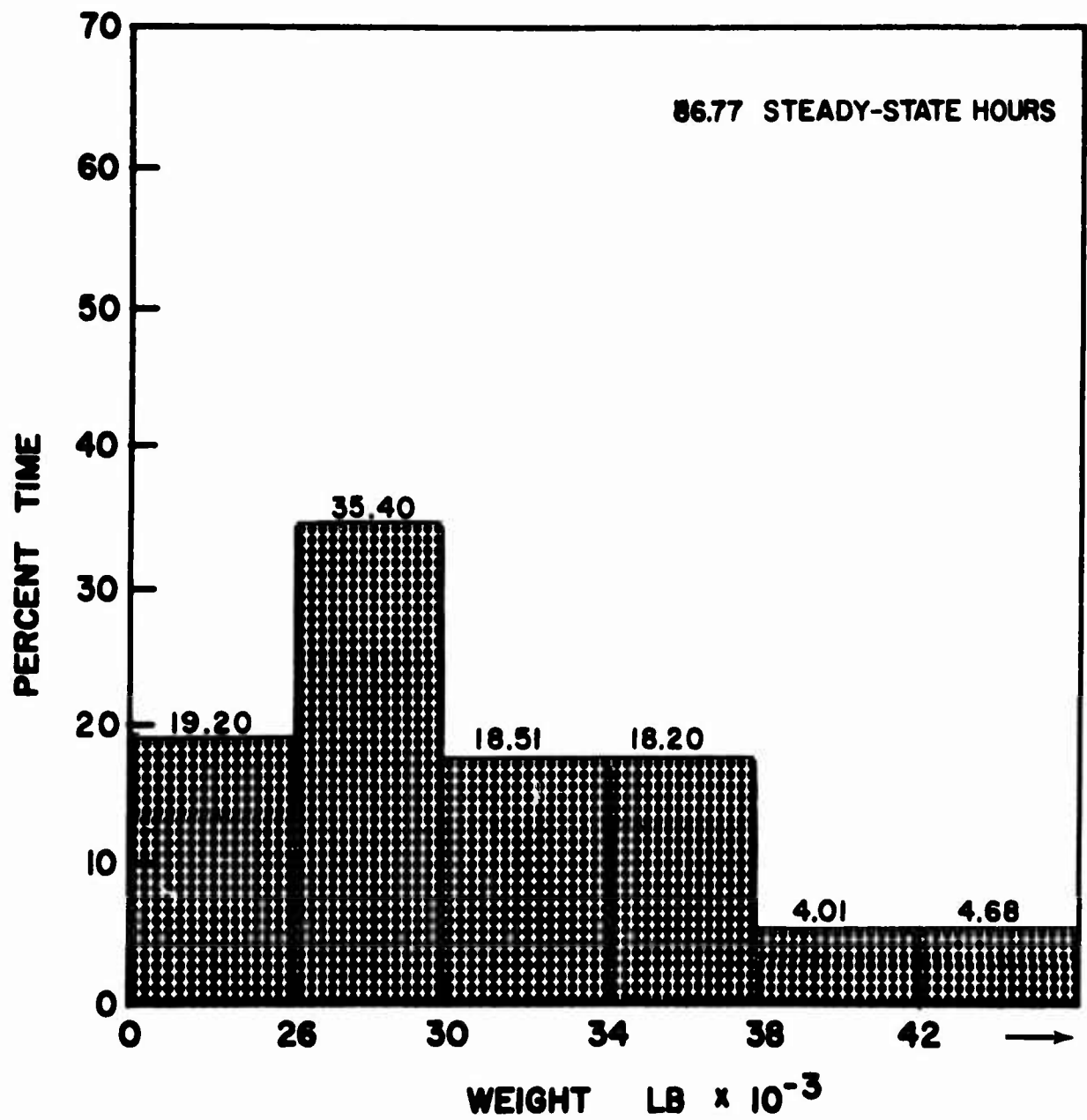


Figure 4. Percentage of Steady-State Mission Segment Flight Time in Each Gross Weight Range.

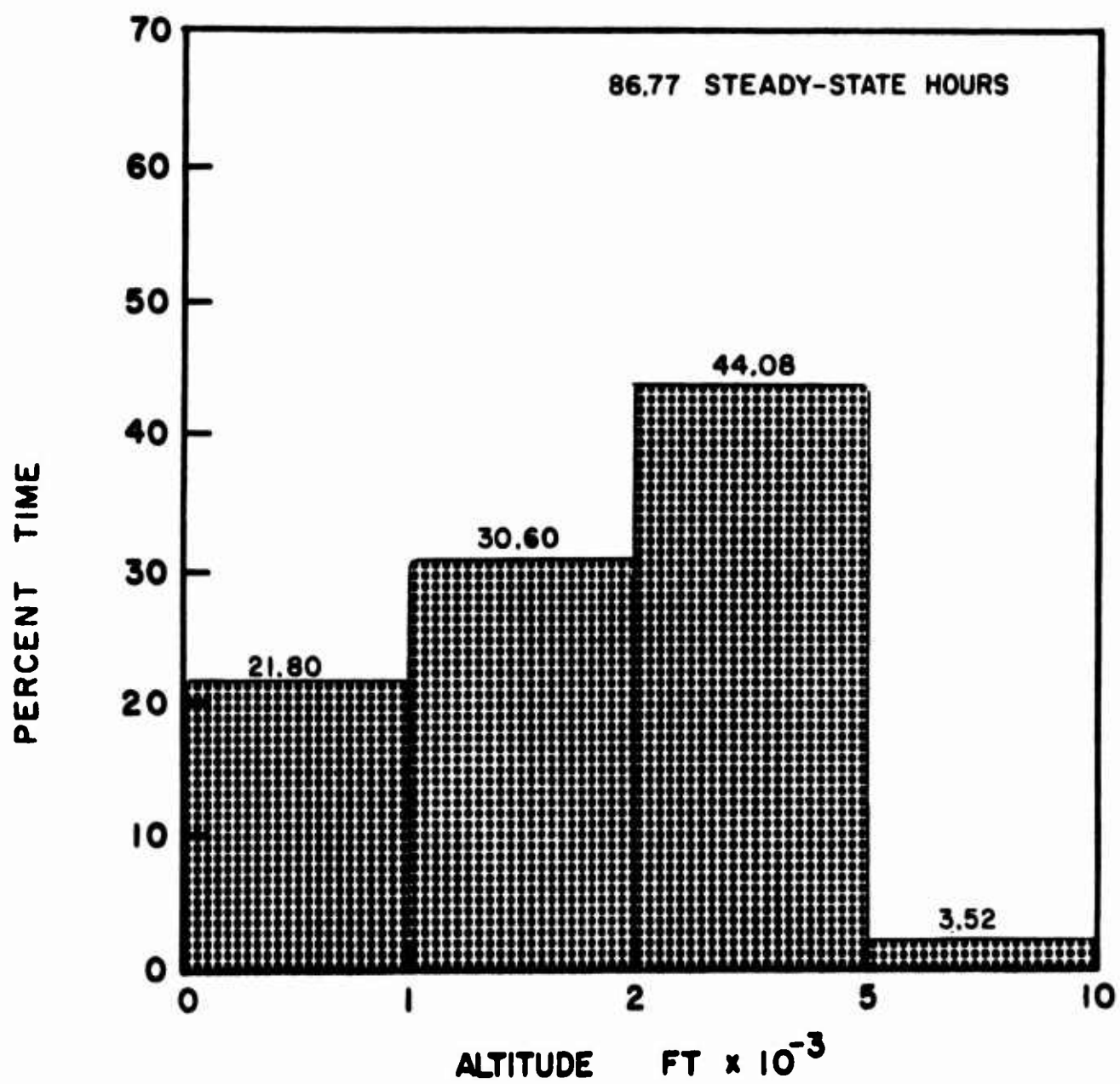


Figure 5. Percentage of Steady-State Mission Segment Flight Time in Each Density Altitude Range.

The rotor rpm was between 180 and 195 for more than 99 percent of the time, with over 50 percent of the steady-state time between 185 and 190 rpm, as shown in Figure 6. The small amount of time spent below 180 rpm was logged during training flights which included one-engine-out landings. This maneuver is discussed in connection with Figure 24.

The outside air temperature never dropped below 30°F. More than 50 percent of the time, the temperature was between 60° and 80°F, as shown in Figure 7.

Rate of climb during steady state was between -300 and +300 feet per minute more than 90 percent of the time, as shown in Figure 8. Small periods of time were recorded down to 1,200 feet per minute and above 1,500 feet per minute. It should be noted, however, that large values of rate of climb which normally occur during transient flight are not included in this report data.

The percentages of steady-state flight time within airspeed ranges are shown in Figures 9 through 15. The complete time is shown in Figure 9 and is then broken down by altitude within weight ranges in Figures 10 through 15. The large percentage of time below 40 knots is the result of hover time spent in picking up and setting off cargo and in performing functions peculiar to the crane operation. Cruise airspeed appears to be between 80 and 110 knots. The maximum airspeed of this aircraft is 120 knots; however, a small percentage of time was recorded above 120 knots. A maximum airspeed of 131 knots occurred in high-speed runs during check flights. The breakdown by gross weight ranges shows that the high airspeeds are achieved at the higher density altitudes and at the lower gross weights. No airspeeds above 110 knots were recorded at weights over 38,000 pounds at density altitudes above 1,000 feet. Very little time was spent at altitudes above 5,000 feet at gross weights over 34,000 pounds.

Exceedance curves for both positive and negative incremental maneuver normal load factor peaks are presented in Figures 16(a) through 16(d), Figures 17(a) through 17(f), and Figure 18. Figure 16 shows these curves broken down by mission segments. The maneuver mission segment is the most severe; however, only 2.16 hours of data are represented. The breakdown by gross weight ranges is shown in Figure 17. The exceedance curves are very similar for all the weight ranges.

The highest values of incremental normal load factor occurred at gross weights between 26,000 and 34,000 pounds. The composite curve is shown in Figure 18. The highest maneuver load factor peak was 1.57, which occurred during the maneuver mission segment and at a gross weight of 26,000 pounds.

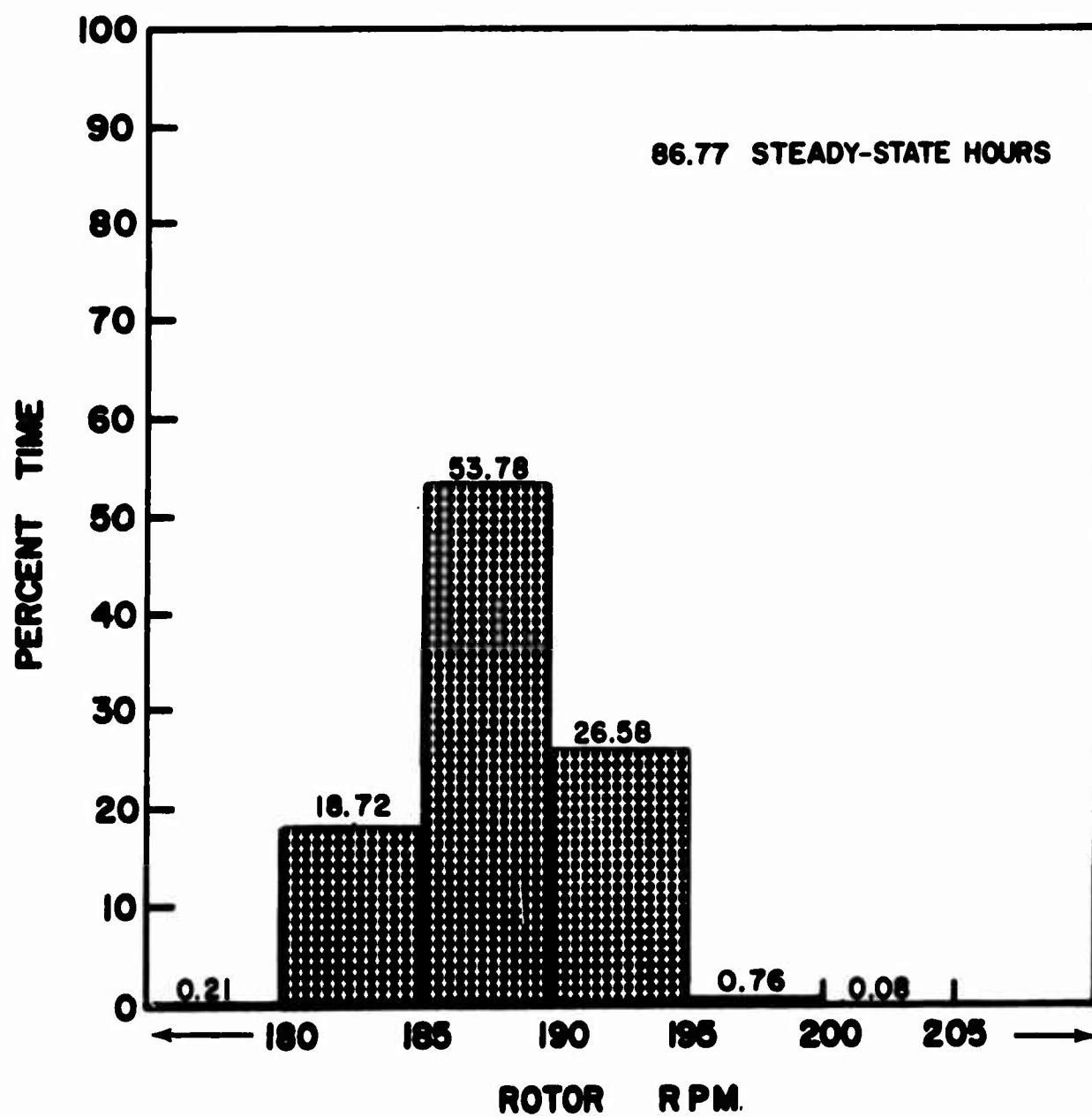


Figure 6. Percentage of Steady-State Mission Segment Flight Time in Each Rotor RPM Range.

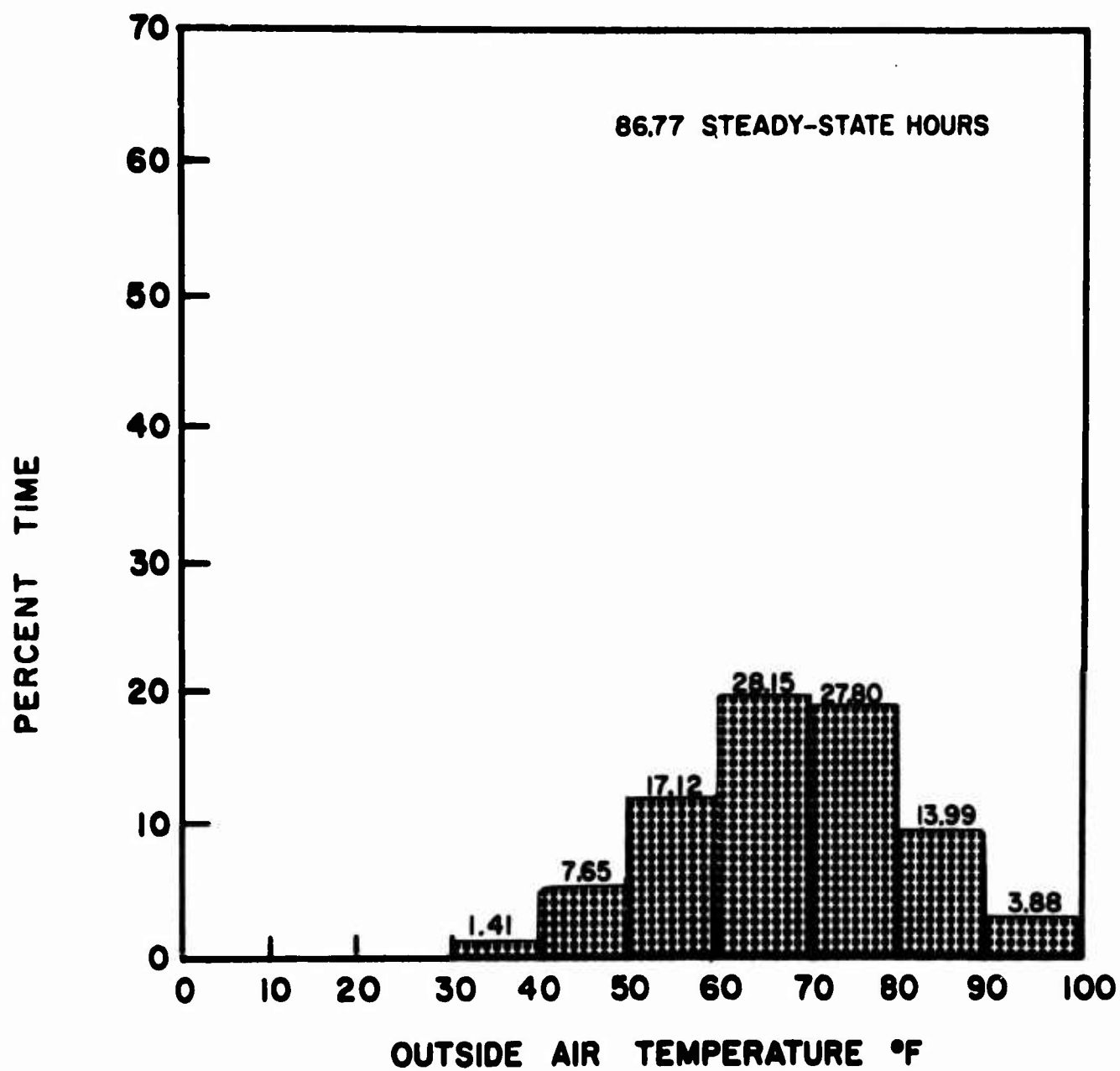


Figure 7. Percentage of Steady-State Mission Segment Flight Time in Each Outside Air Temperature Range.

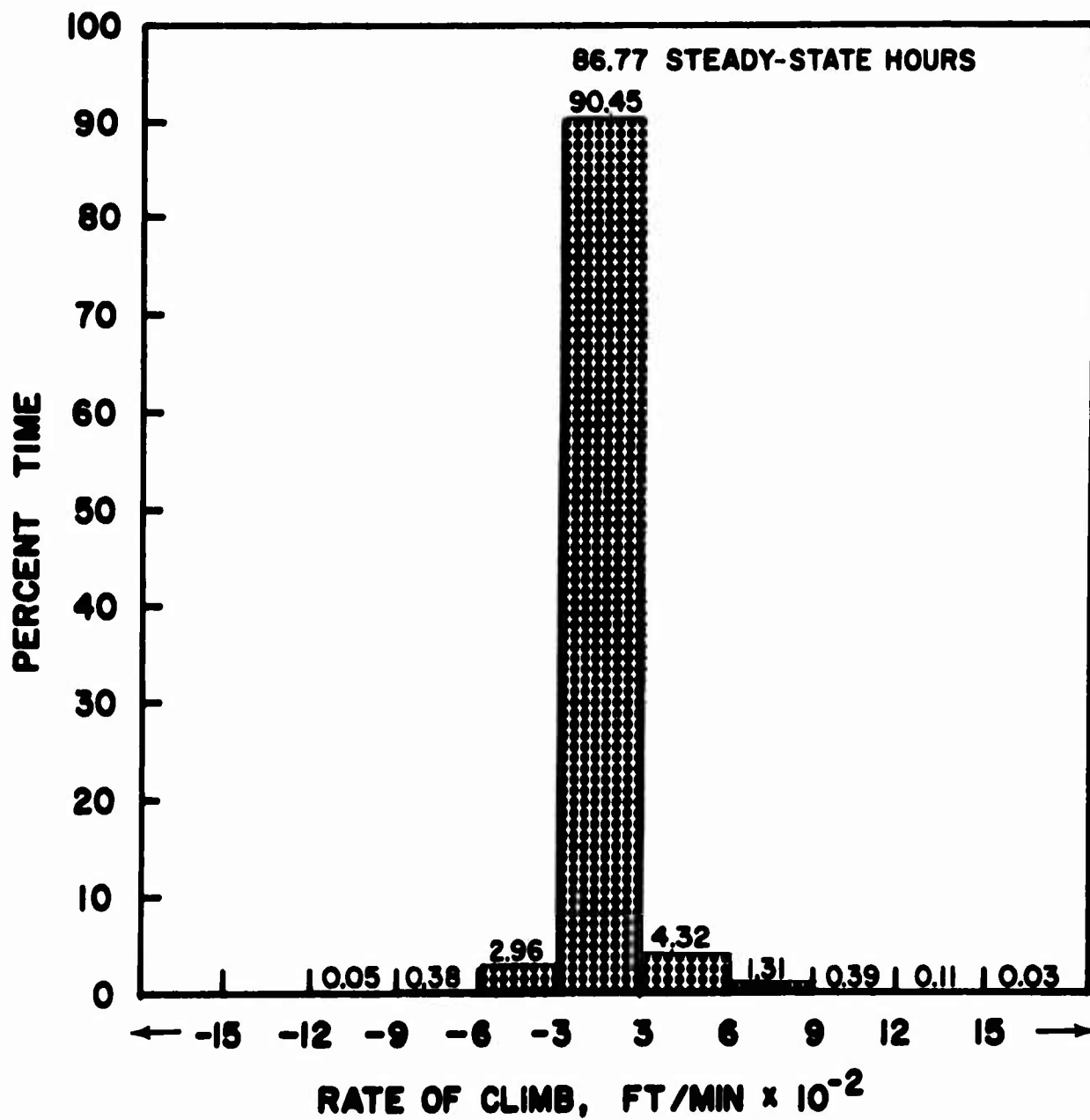


Figure 8. Percentage of Steady-State Mission Segment Flight Time in Each Rate of Climb Range.

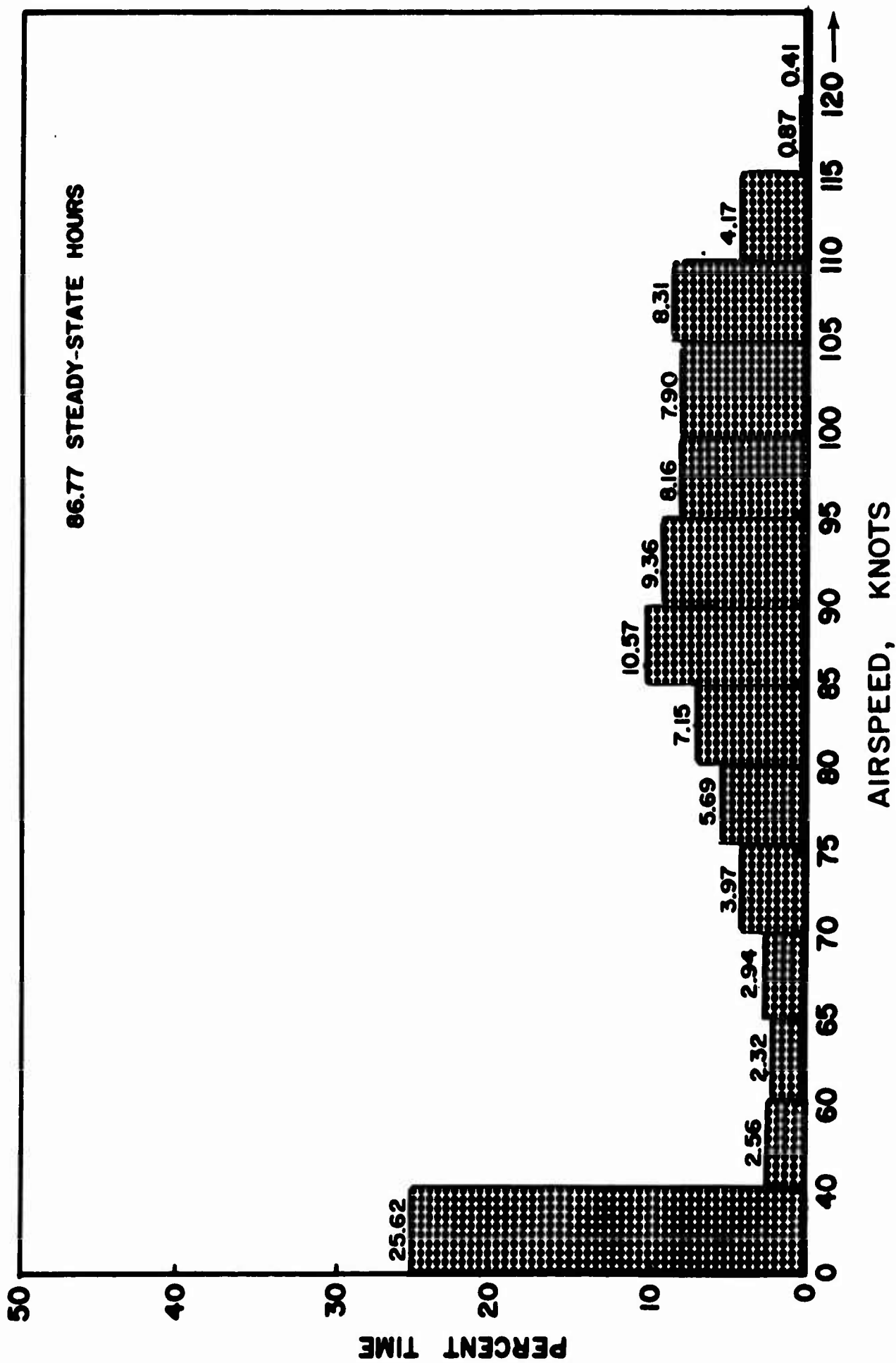


Figure 9. Percentage of Steady-State Mission Segment Flight Time in Each Airspeed Range.

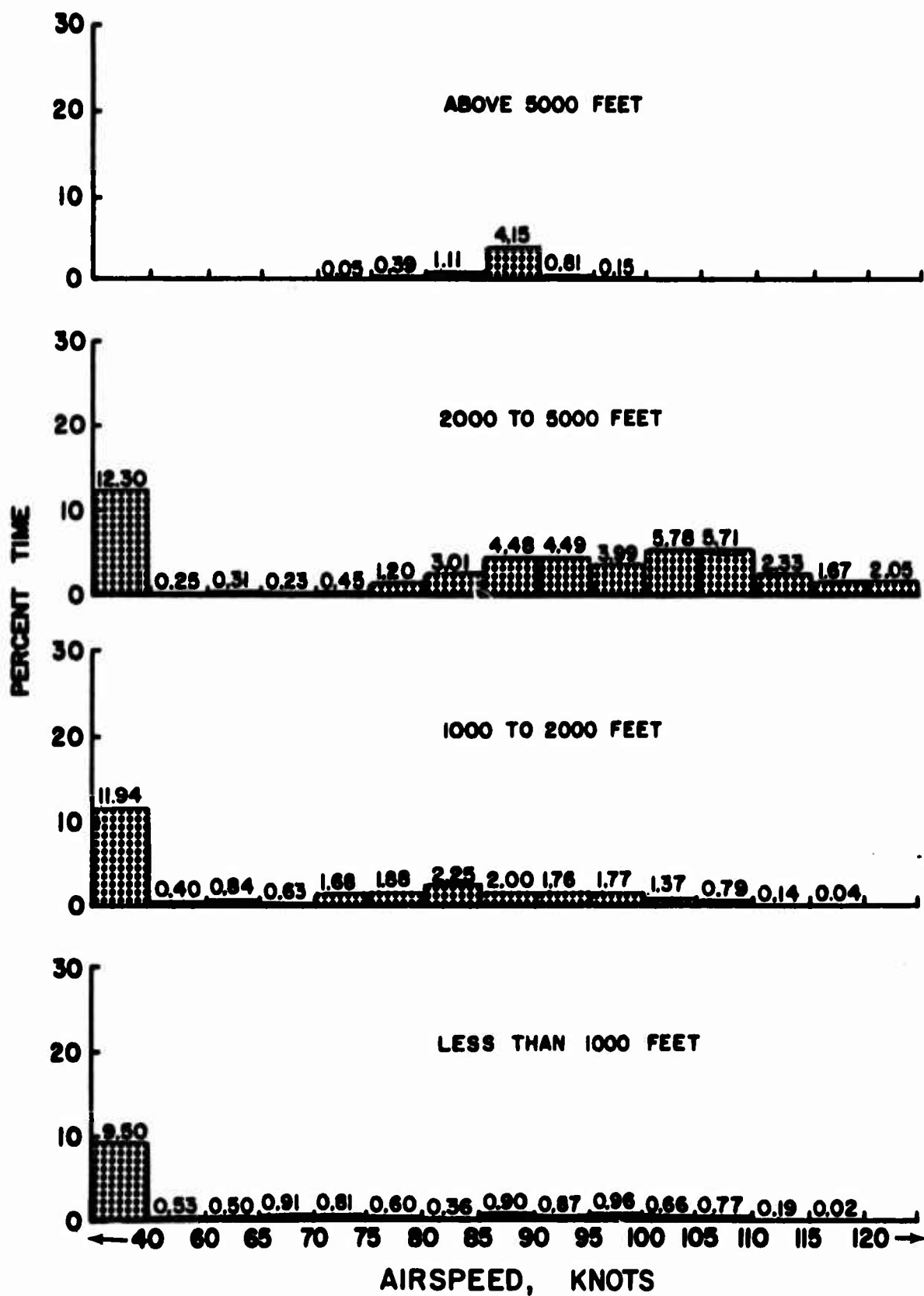


Figure 10. Time in Steady-State Mission Segment in Less-Than-26,000-Pound Gross Weight Range Broken Down by Percentage in Each Density Altitude-Airspeed Range.

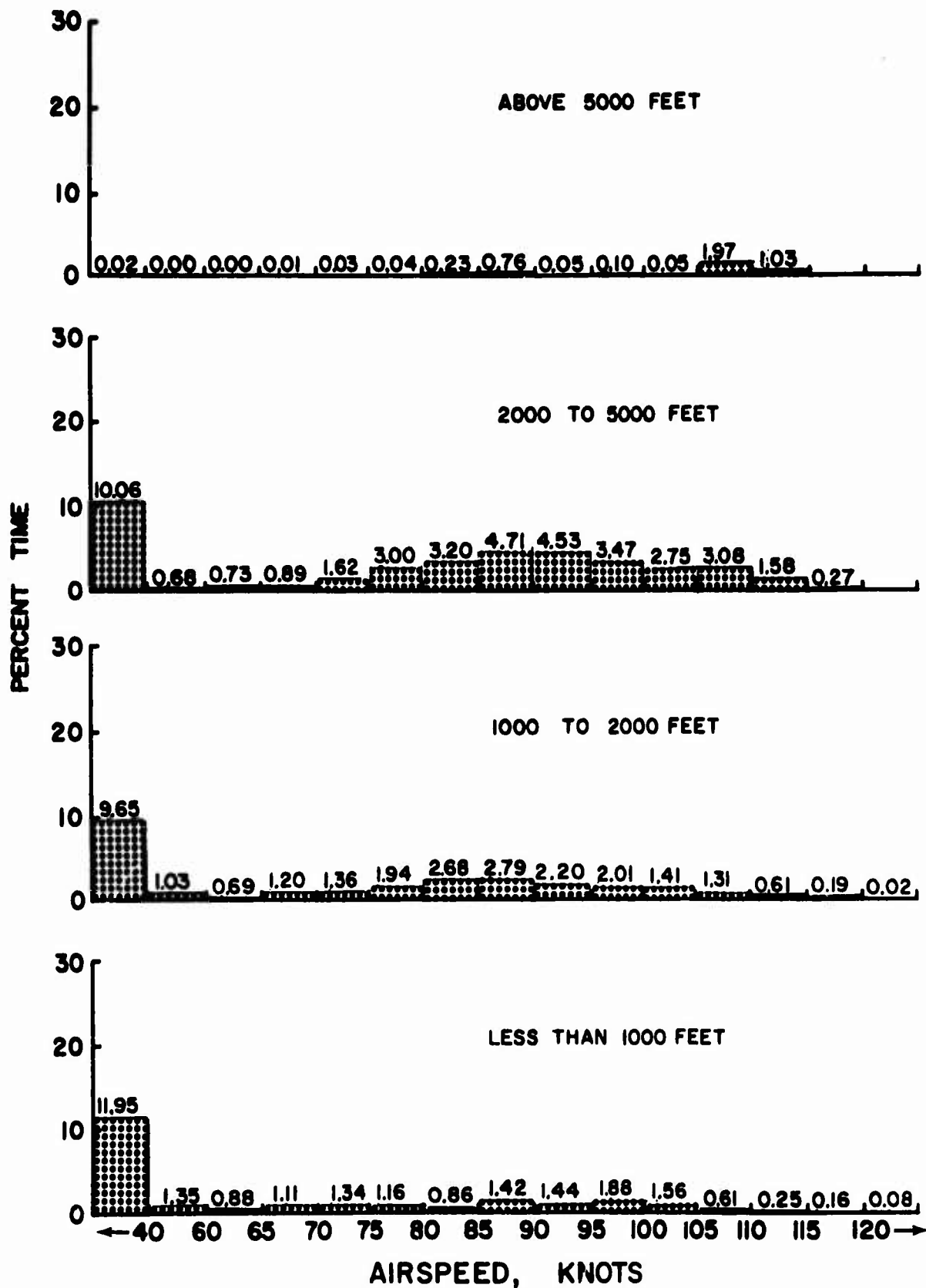


Figure 11. Time in Steady-State Mission Segment in 26,000-to-30,000-Pound Gross Weight Range Broken Down by Percentage in Each Density Altitude-Airspeed Range.

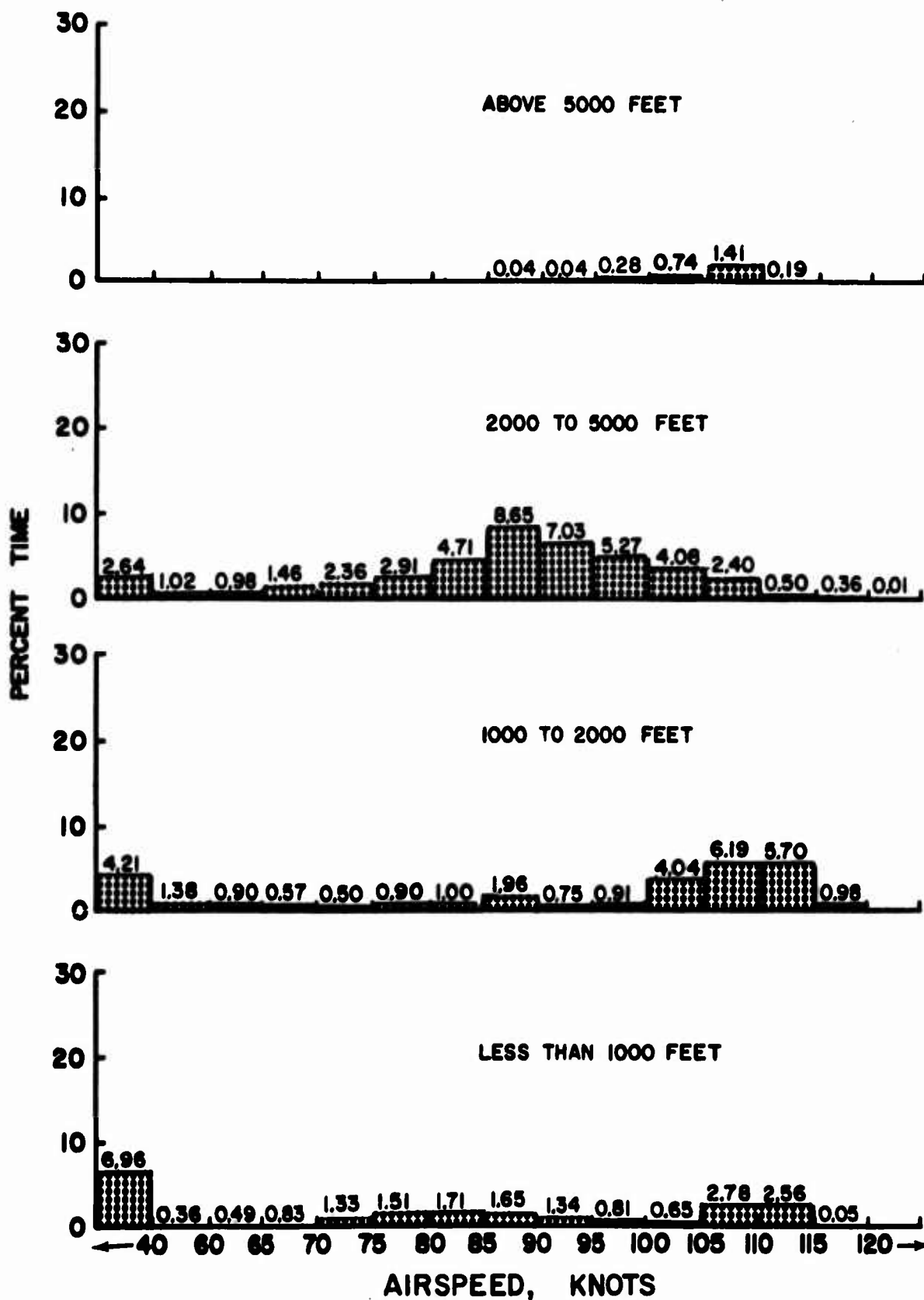


Figure 12. Time in Steady-State Mission Segment in 30,000-to-34,000-Pound Gross Weight Range Broken Down by Percentage in Each Density Altitude-Airspeed Range.

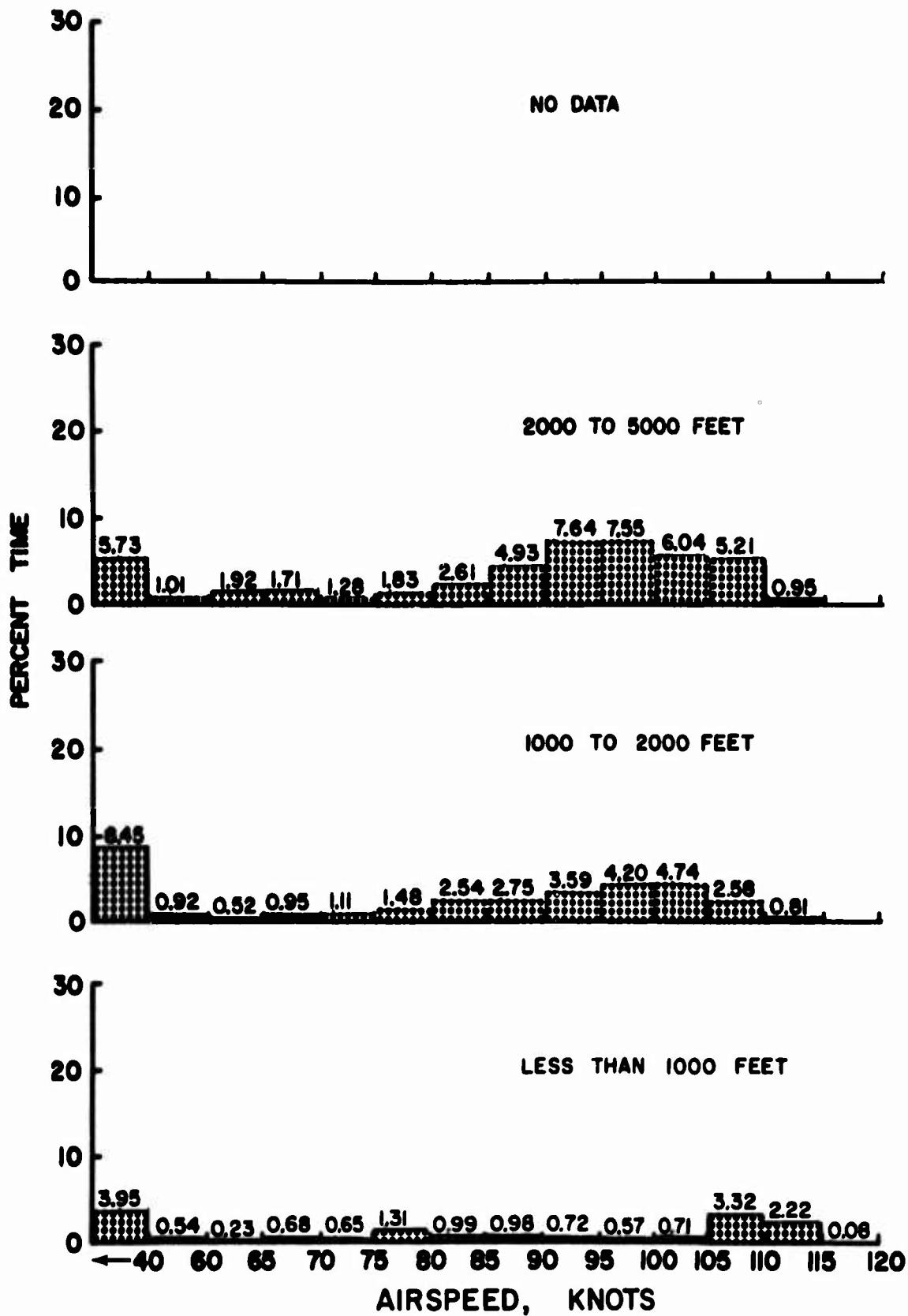


Figure 13. Time in Steady-State Mission Segment in 34,000-to-38,000-Pound Gross Weight Range Broken Down by Percentage in Each Density Altitude-Airspeed Range.

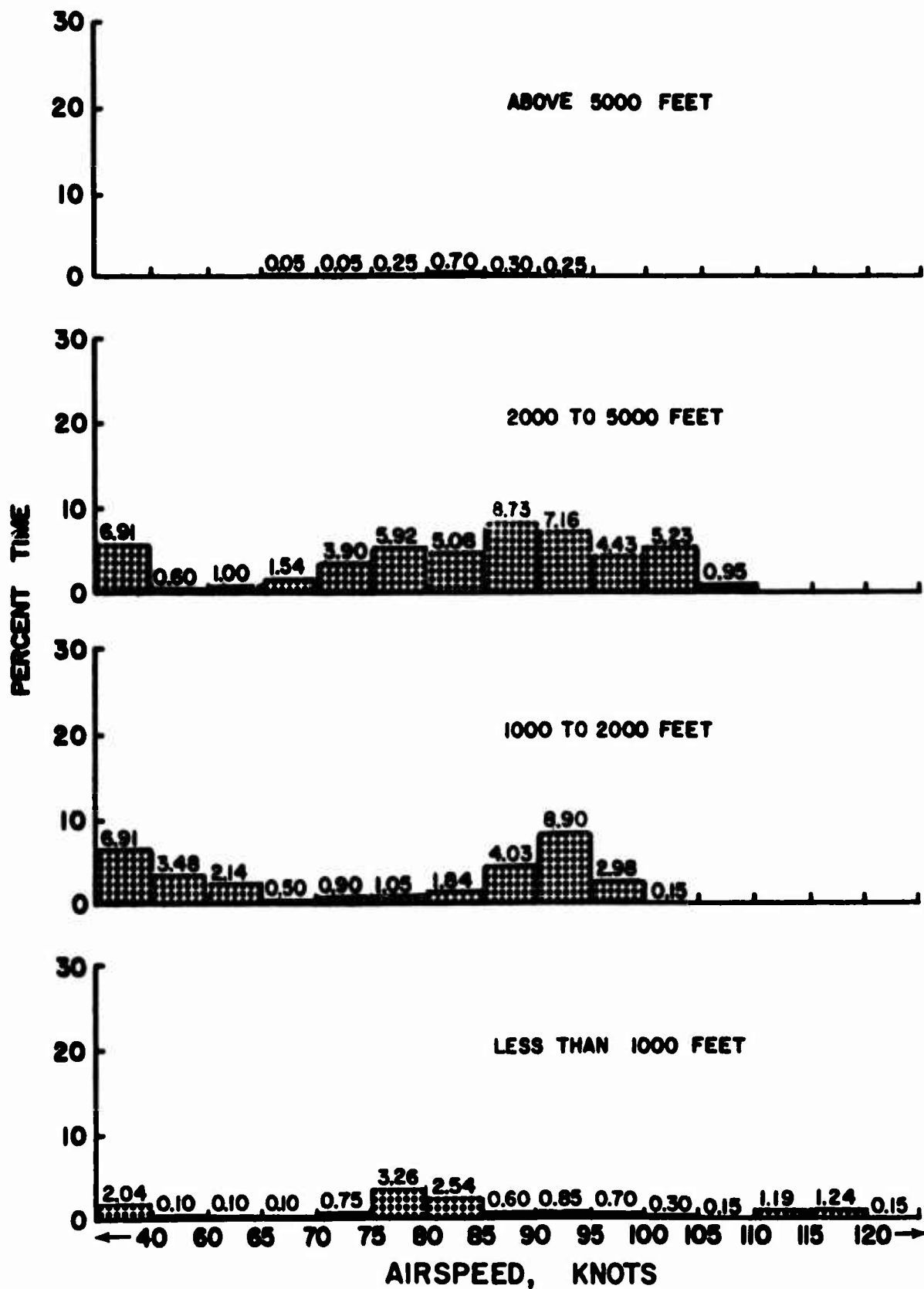


Figure 14. Time in Steady-State Mission Segment in 38,000-to-42,000-Pound Gross Weight Range Broken Down by Percentage in Each Density Altitude-Airspeed Range.

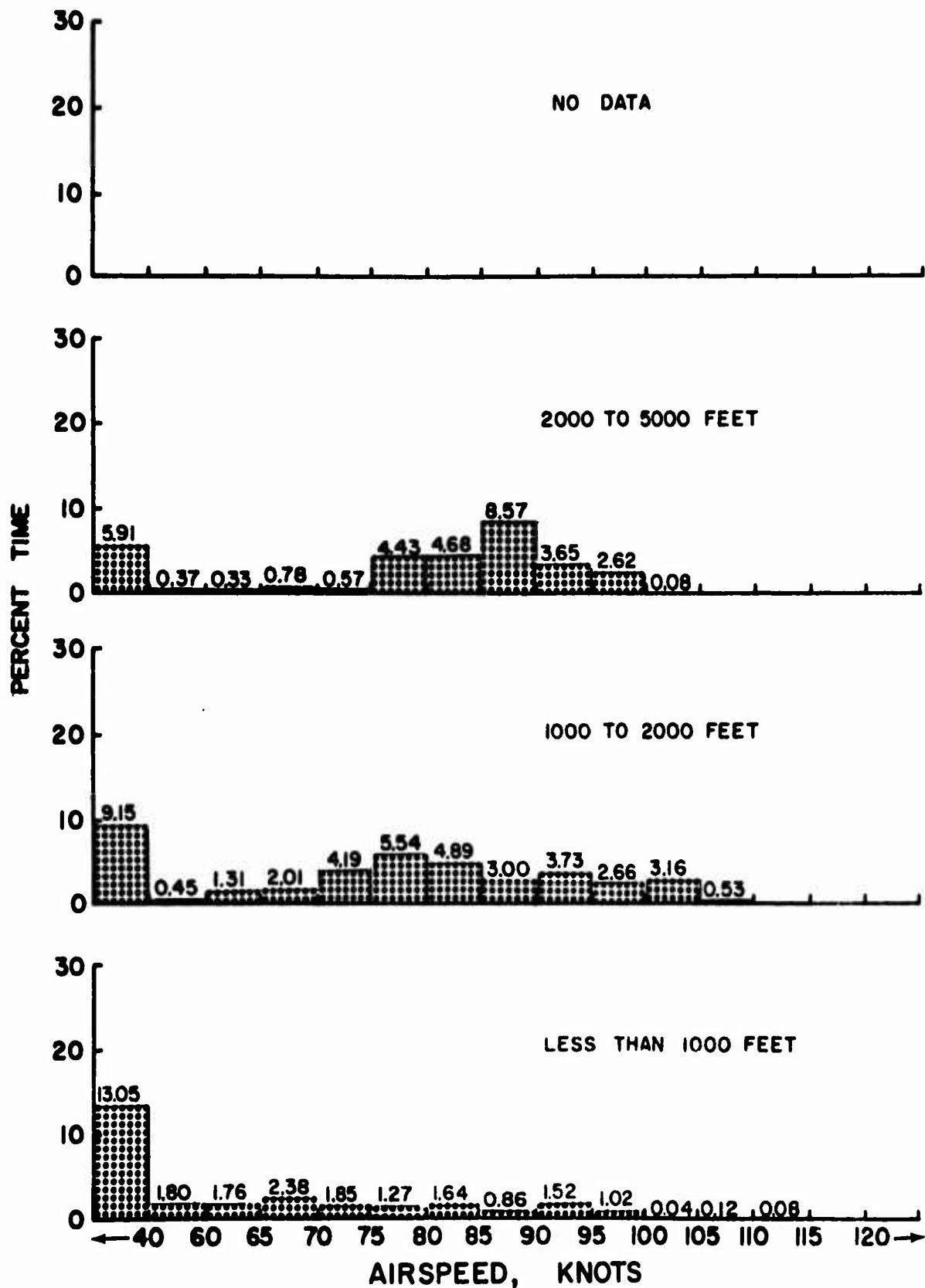


Figure 15. Time in Steady-State Mission Segment in Over-42,000-Pound Gross Weight Range Broken Down by Percentage in Each Density Altitude-Airspeed Range.

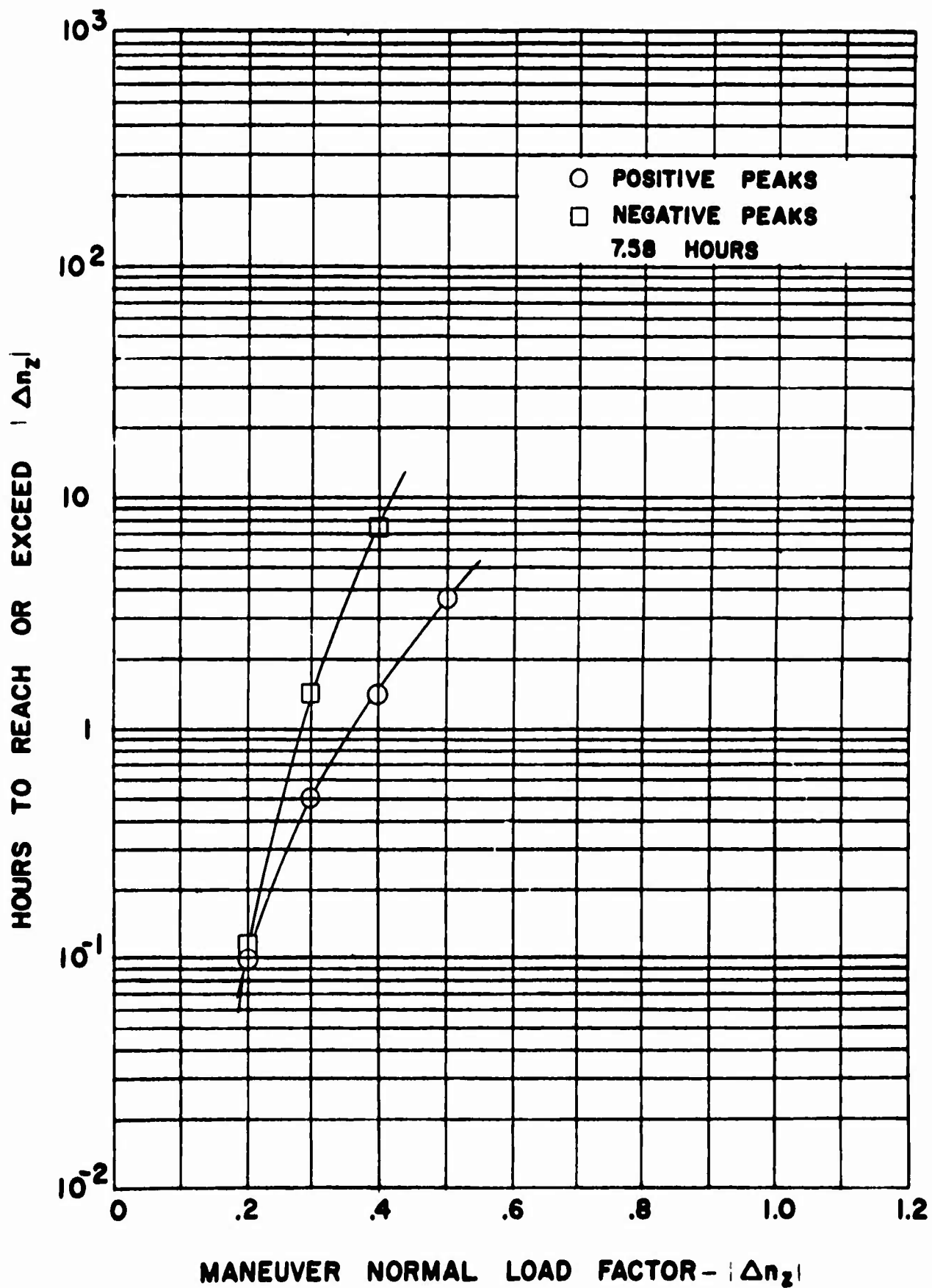


Figure 16. Exceedance Curves for Incremental Maneuver Normal Load Factor Peaks by Mission Segment.

(a) Ascent Mission Segment

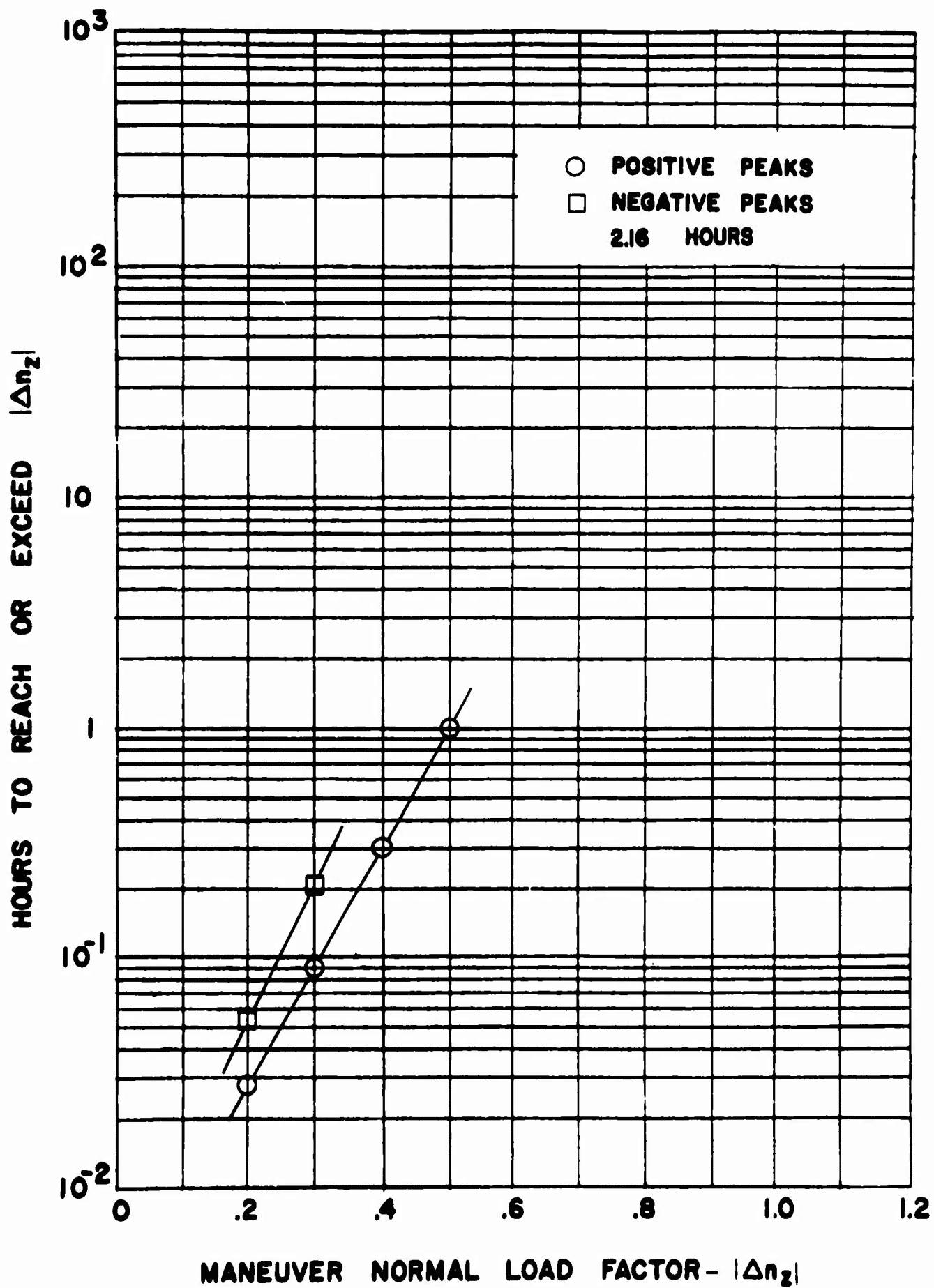


Figure 16. (b) Maneuver Mission Segment.

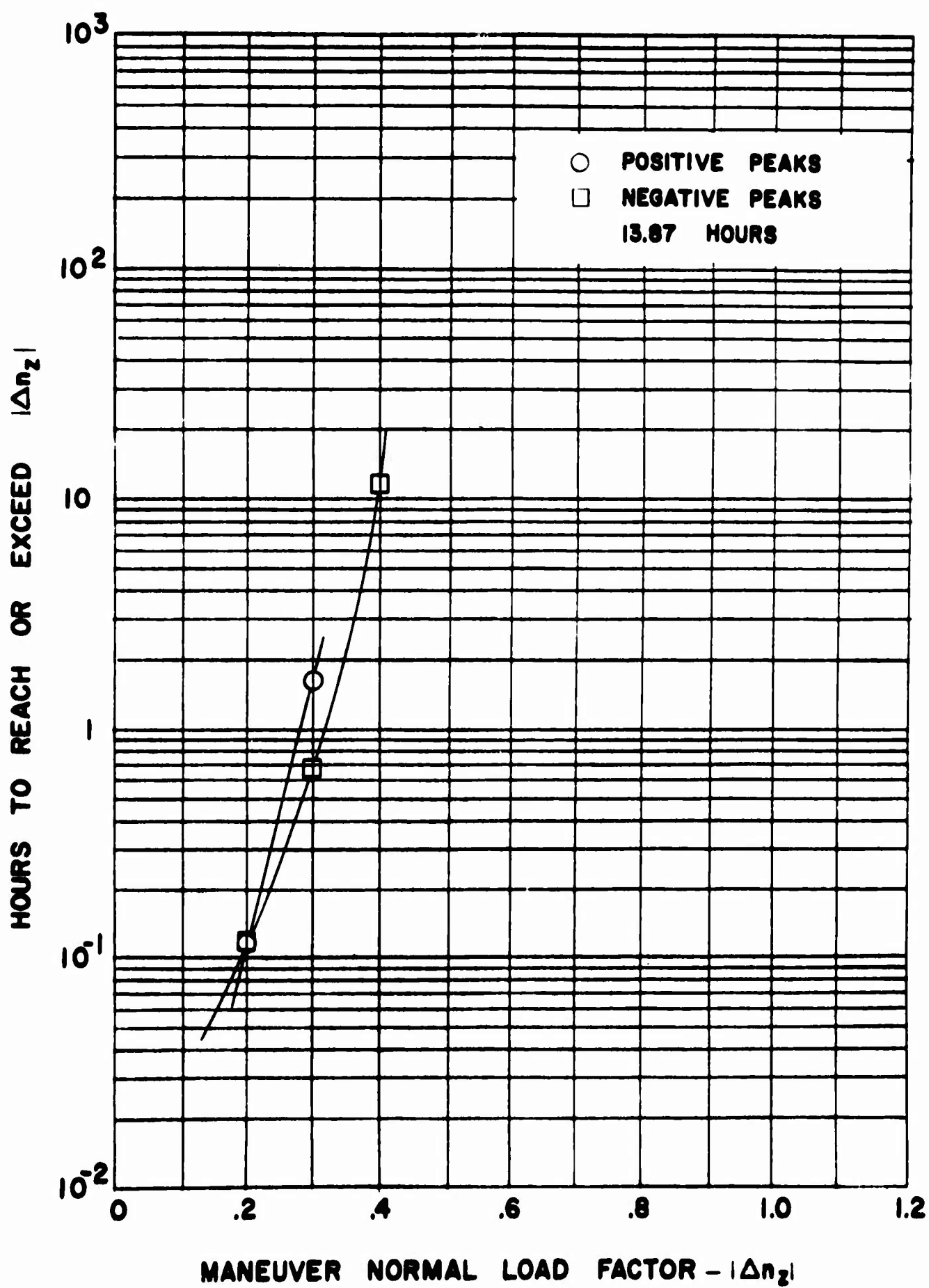


Figure 16. (c) Descent Mission Segment.

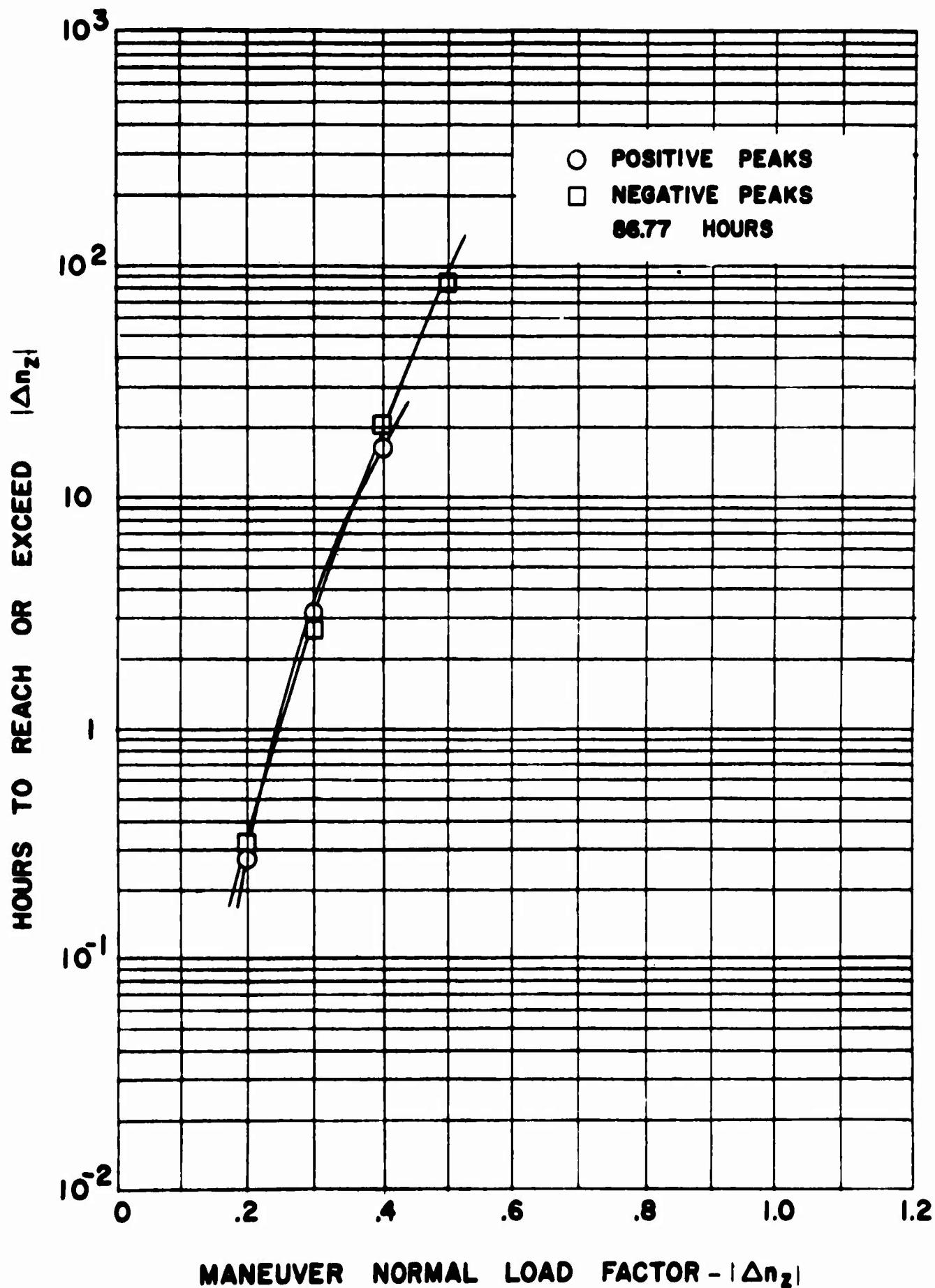


Figure 16. (d) Steady-State Mission Segment.

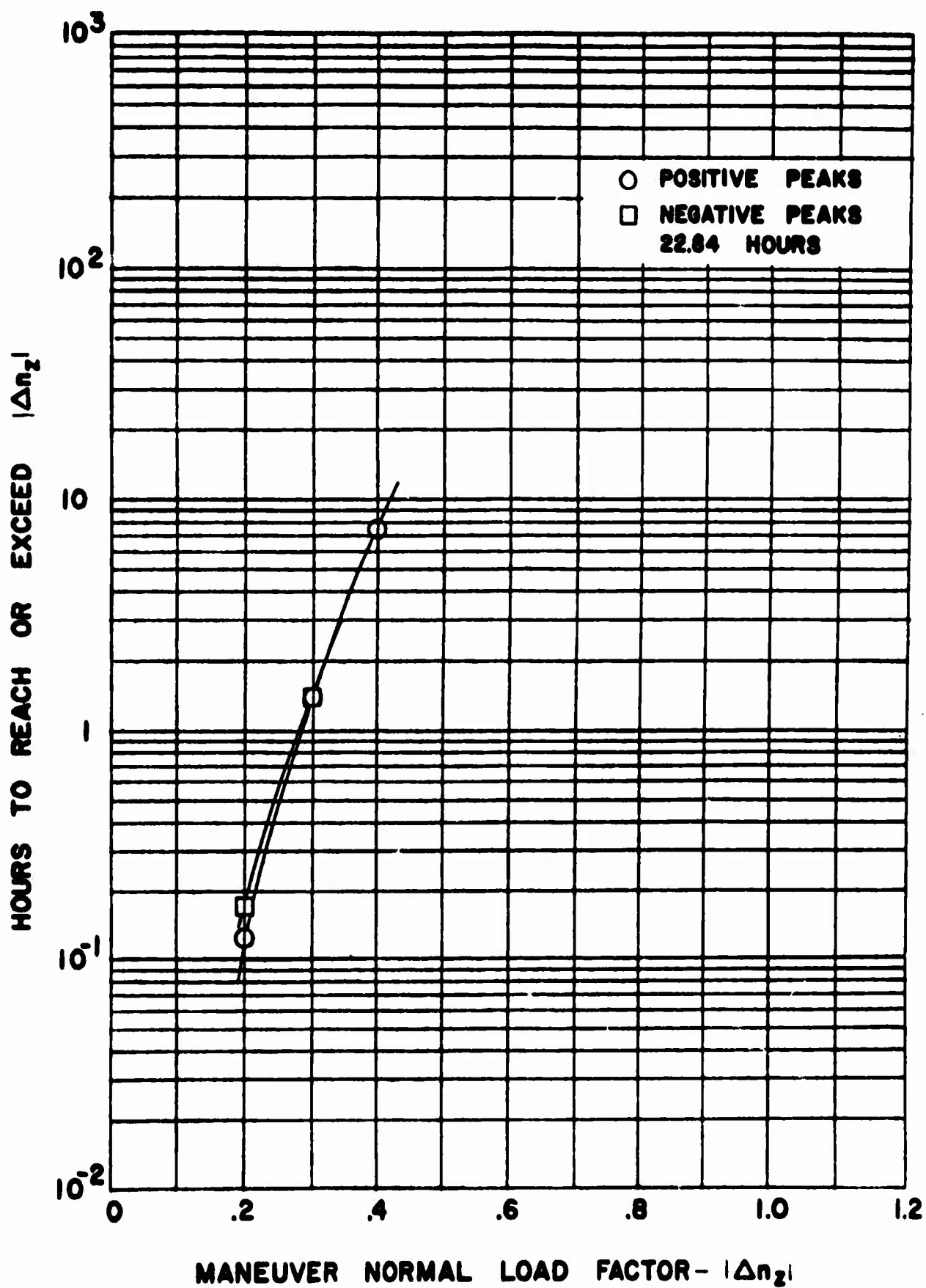


Figure 17. Exceedance Curves for Incremental Maneuver Normal Load Factor Peaks by Gross Weight Ranges.

(a) Gross Weight Less Than 26,000 Pounds.

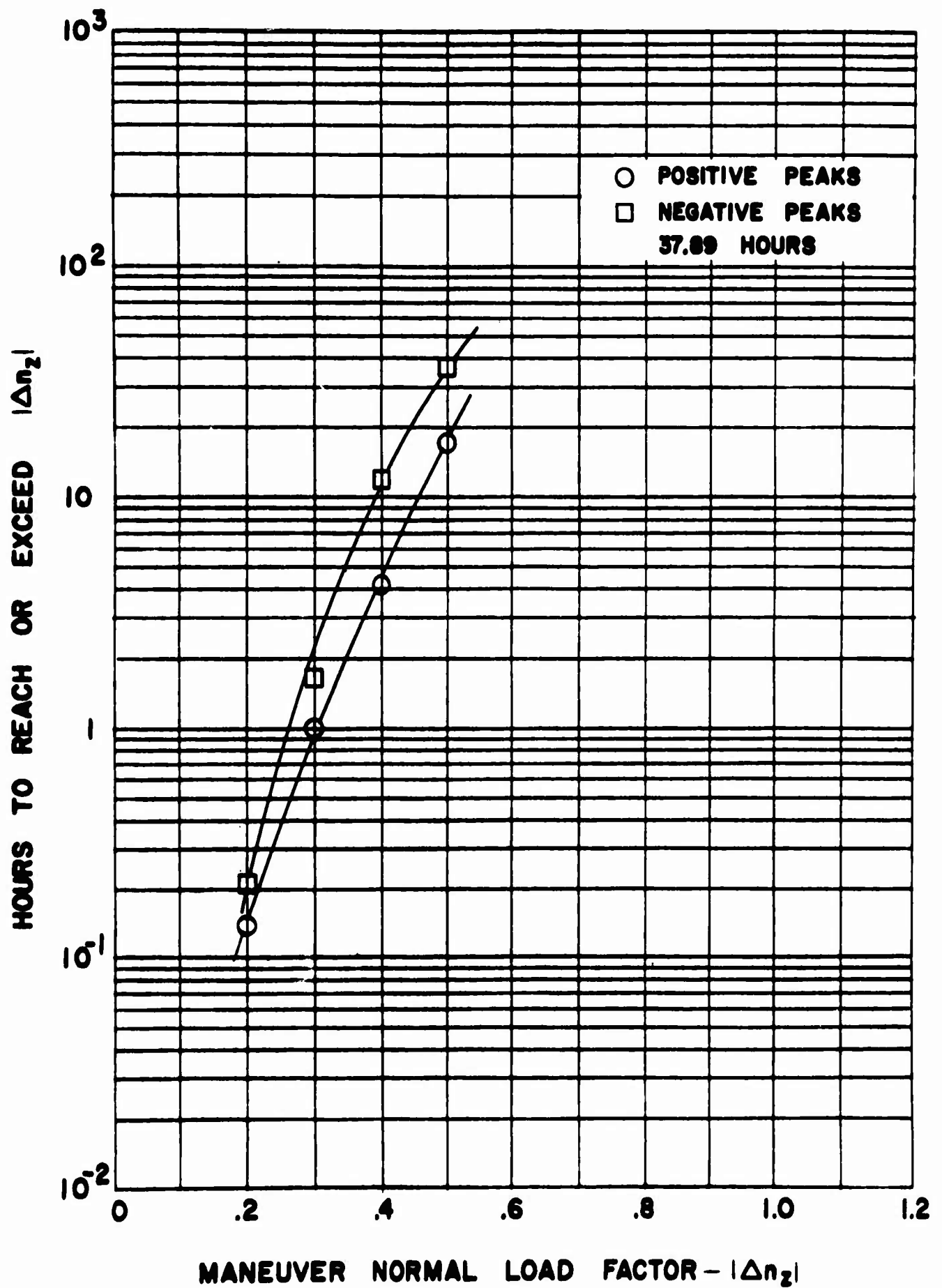


Figure 17. (b) Gross Weight 26,000 to 30,000 Pounds.

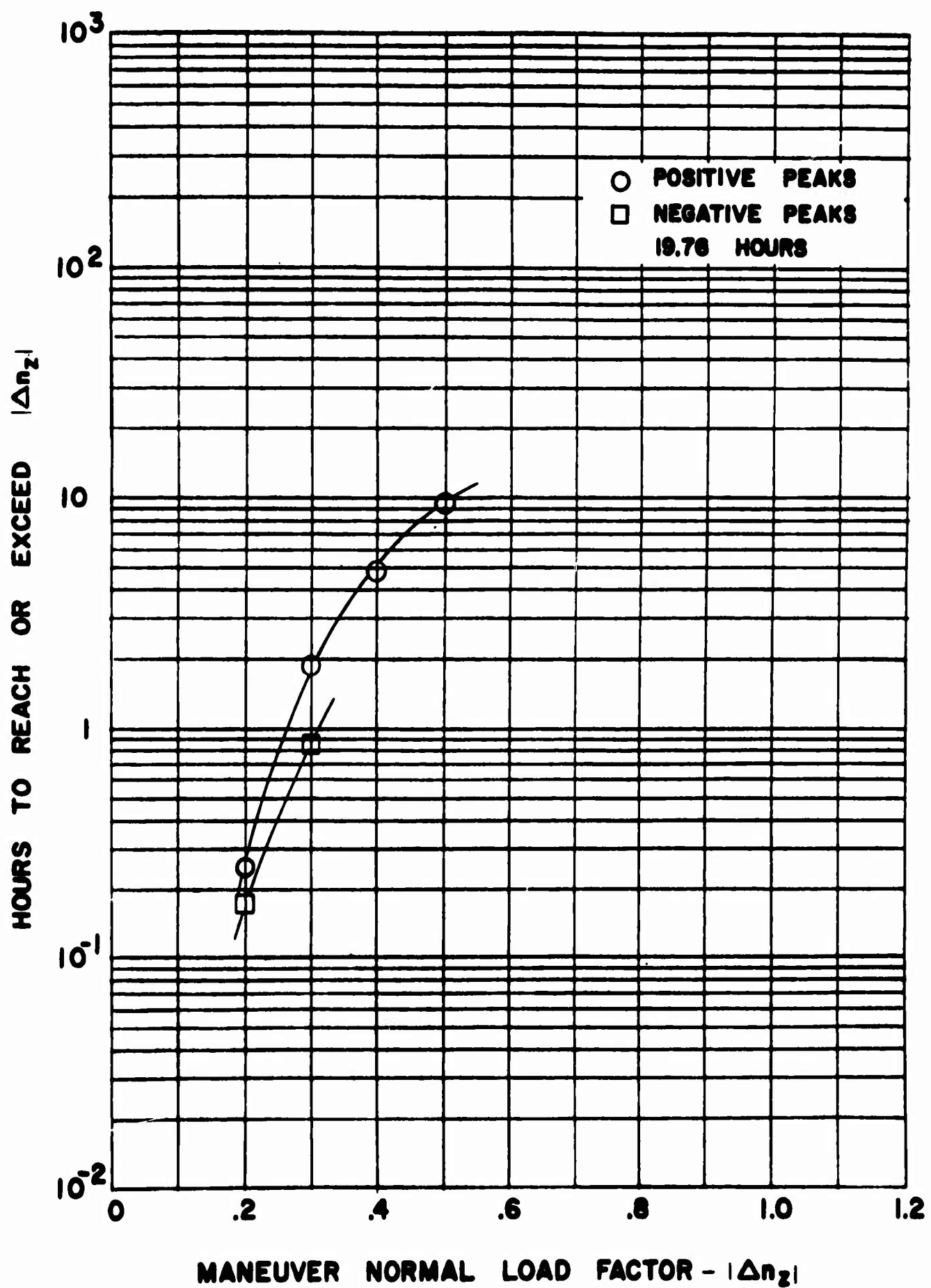


Figure 17. (c) Gross Weight 30,000 to 34,000 Pounds.

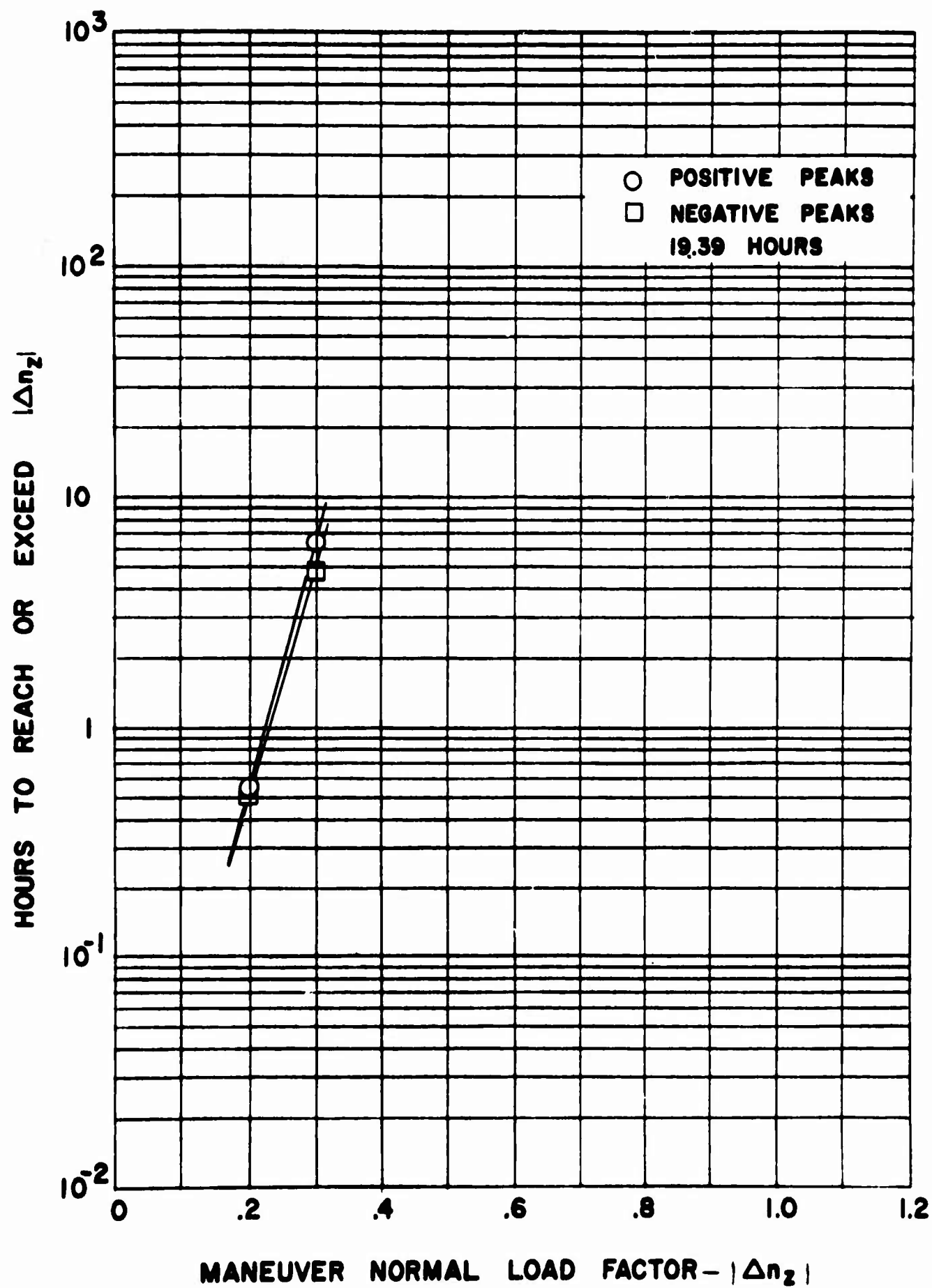


Figure 17. (d) Gross Weight 34,000 to 38,000 Pounds.

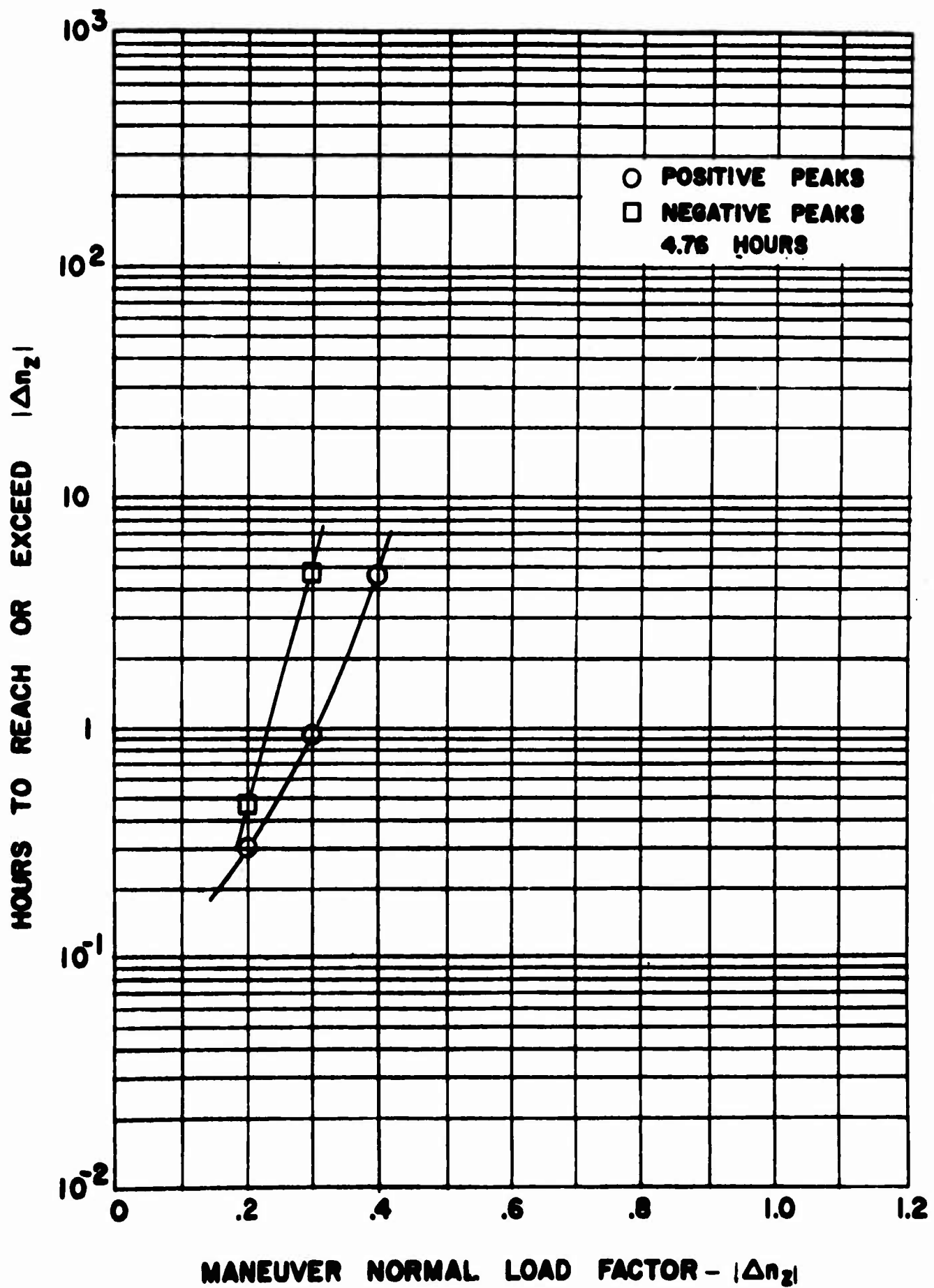


Figure 17. (e) Gross Weight 38,000 to 42,000 Pounds.

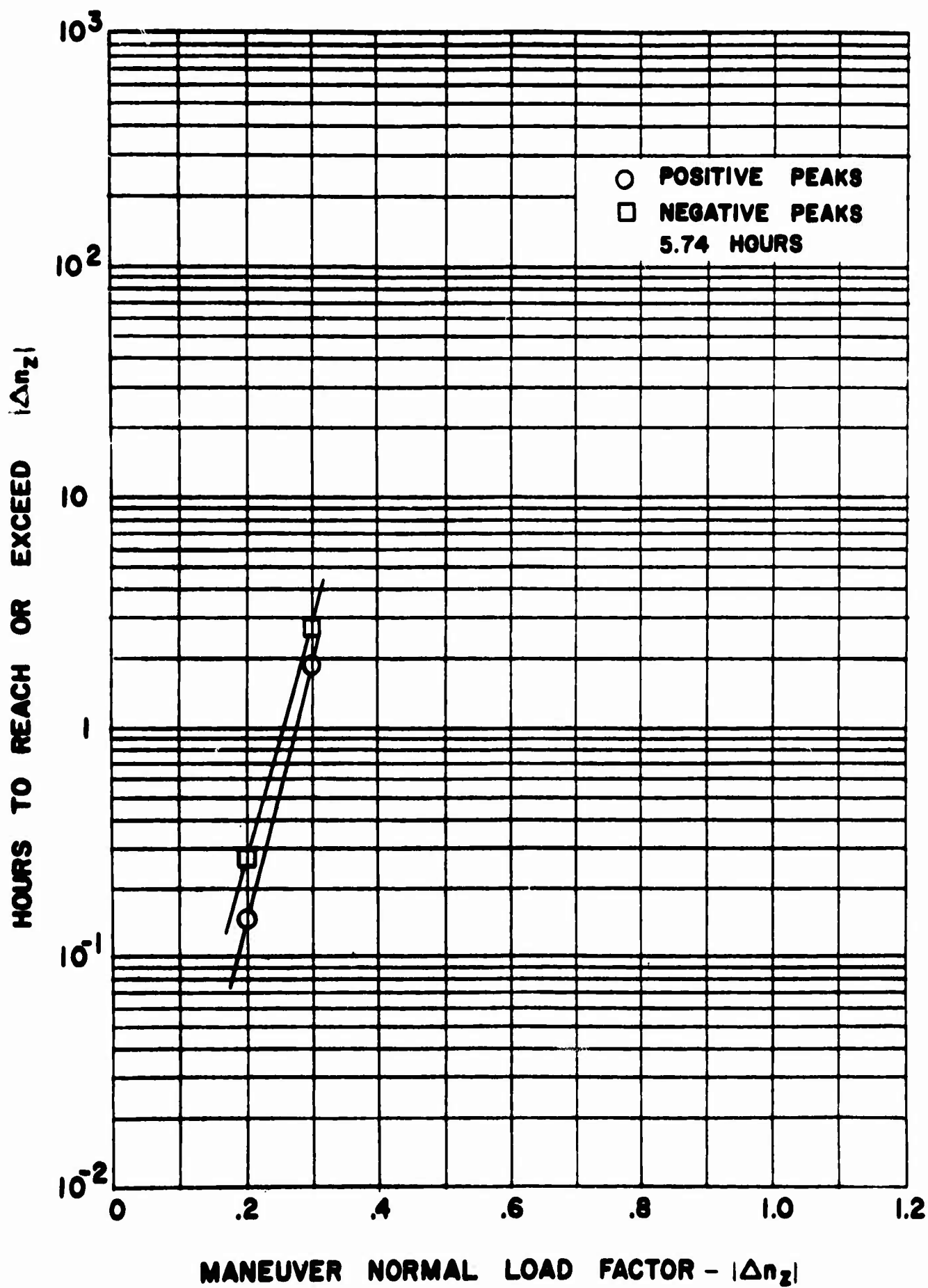


Figure 17. (f) Gross Weight Over 42,000 Pounds.

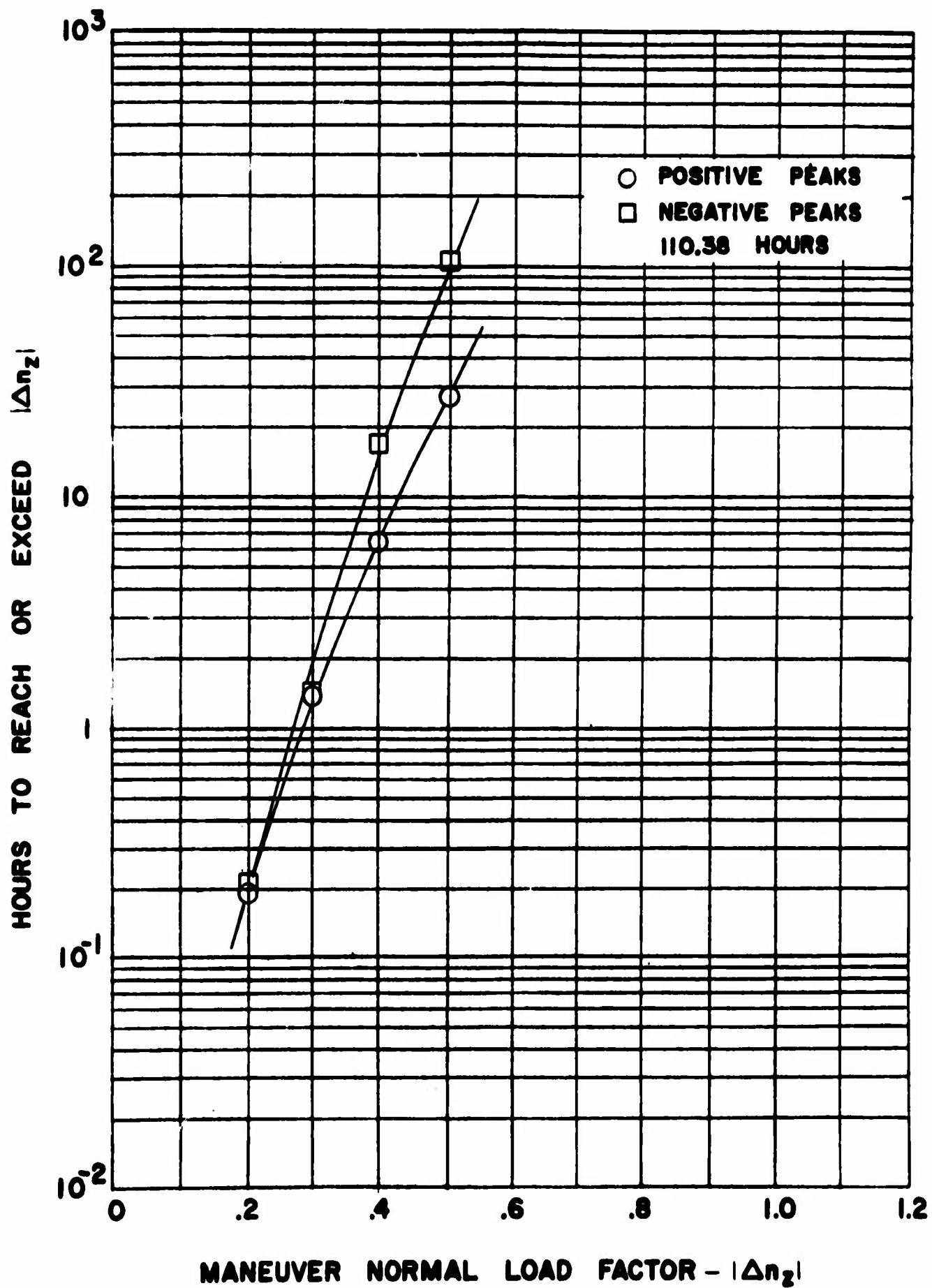


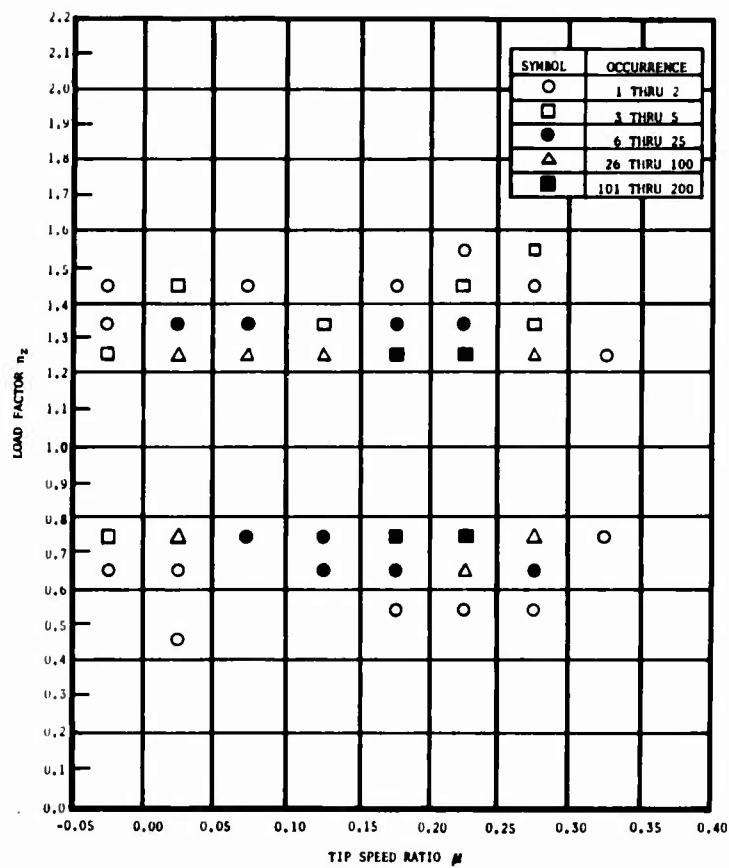
Figure 18. Exceedance Curves for Incremental Maneuver Normal Load Factor Peaks, Composite.

Figure 19 shows a diagram and tabulation of the incremental maneuver normal load factor peaks versus the rotor tip speed ratio. The majority of the load factor peaks fall at the middle of the tip speed ratio ranges.

Figures 20(a) through 20(d), Figures 21(a) through 21(f), and Figure 22 show exceedance curves for both positive and negative incremental gust normal load factor peaks broken down by mission segment and gross weight ranges. The most severe gust environment was encountered during the steady-state mission segment. This is due in part to the criteria used for the establishment of gust peaks, which state that the peaks are not preceded by control stick motions. Since, in general, the steady-state mission segment is characterized by a quiet stick, the load factor peaks in this mission segment have a greater probability of being gusts than maneuvers. The breakdown by gross weight shows that for gross weights up to 38,000 pounds, the curves are similar for each weight range; however, above 38,000 pounds, no incremental gust normal load factors above 0.4g were recorded. The composite incremental gust normal load factor plot of Figure 22 indicates that the positive and negative increments have a very similar profile. This is to be expected if the gusts are considered to be symmetrical. The highest gust normal load factor recorded was 1.47.

Figure 23 shows a diagram and tabulation of gust normal load factor peaks versus ranges of airspeed. It can be seen that the distribution is quite uniform throughout airspeed ranges from 75 to 110 knots.

Figure 24 shows an oscillogram of a simulated engine failure and a resulting one-engine-out landing. The gas producer rpm and the engine torque of the failed engine fall rapidly at engine failure. At the same time, the gas producer rpm and the torque of the remaining engine are seen to increase to compensate for the lost power. The rotor rpm fell from 183 to 159. The pilot increased the collective pitch to maintain altitude, which also contributed to the loss of rpm. The rpm then increased as the torque was increasing and reached a value of 174 rpm just prior to landing. The gross weight at the time of engine loss was 28,345 pounds, and the pressure altitude was 1,943 feet. The pressure altitude at takeoff was 1,847 feet. Airspeed at engine-out was below 20 knots. The flight time recorded at a rotor rpm below 180 is attributed to test and training flights such as the engine-out landing.



LOAD FACTOR n_z	TIP SPEED RATIO μ									TOTAL
	LESS THAN 0.00	0.00 TO 0.05	0.05 TO 0.10	0.10 TO 0.15	0.15 TO 0.20	0.20 TO 0.25	0.25 TO 0.30	0.30 TO 0.35	0.35 TO 0.40	
2.0 TO 2.2										
1.9 TO 2.0										
1.8 TO 1.9										
1.7 TO 1.8										
1.6 TO 1.7										
1.5 TO 1.6						1	3			4
1.4 TO 1.5	2	3	1		1	5	1			13
1.3 TO 1.4	2	11	7	5	13	13	5			56
1.2 TO 1.3	3	40	21	44	160	181	44	1		494
0.8 TO 1.2										
0.7 TO 0.8	6	51	16	20	113	173	38	2		399
0.6 TO 0.7	2	2		7	16	26	8			61
0.5 TO 0.6					2	2	1			5
0.4 TO 0.5		1								1
0.2 TO 0.4										
0.0 TO 0.2										
TOTAL	15	88	45	76	305	401	100	3		1033

Figure 19. Diagram and Tabulation of Maneuver Normal Load Factor Peaks in Ranges of Rotor Tip Speed Ratio .

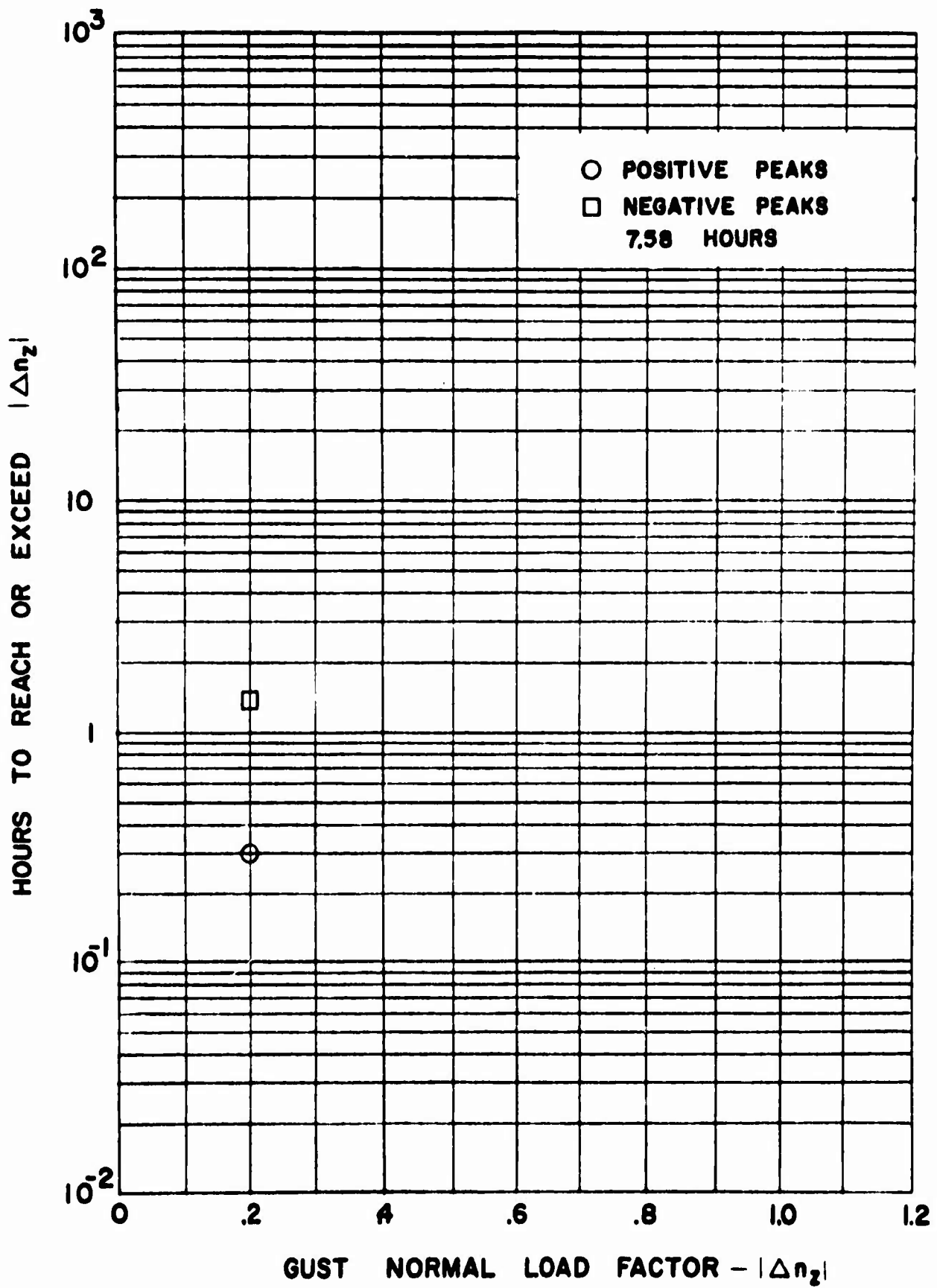


Figure 20. Exceedance Curves for Incremental Gust Normal Load Factor Peaks by Mission Segment .

(a) Ascent Mission Segment

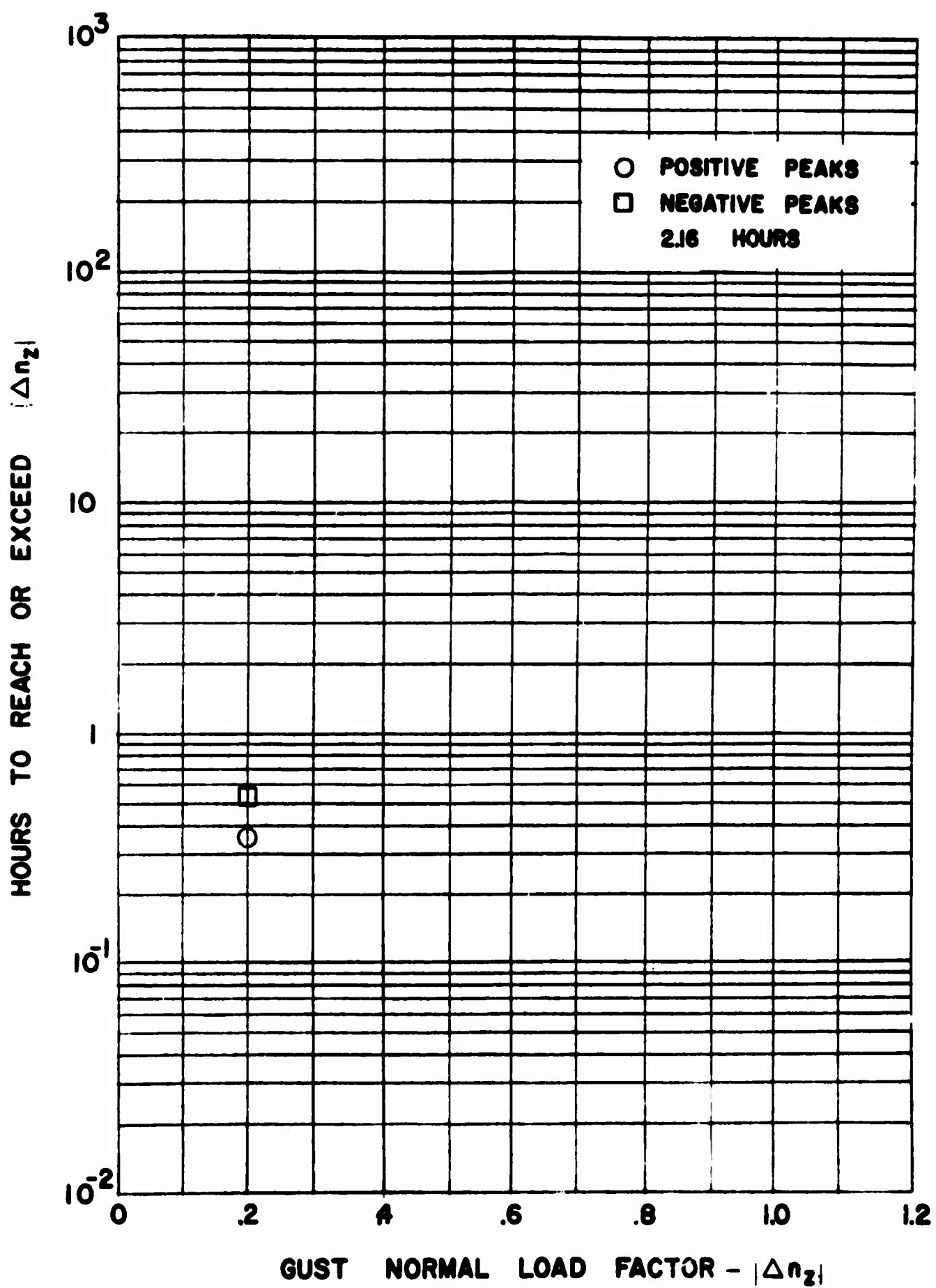


Figure 20. (b) Maneuver Mission Segment.

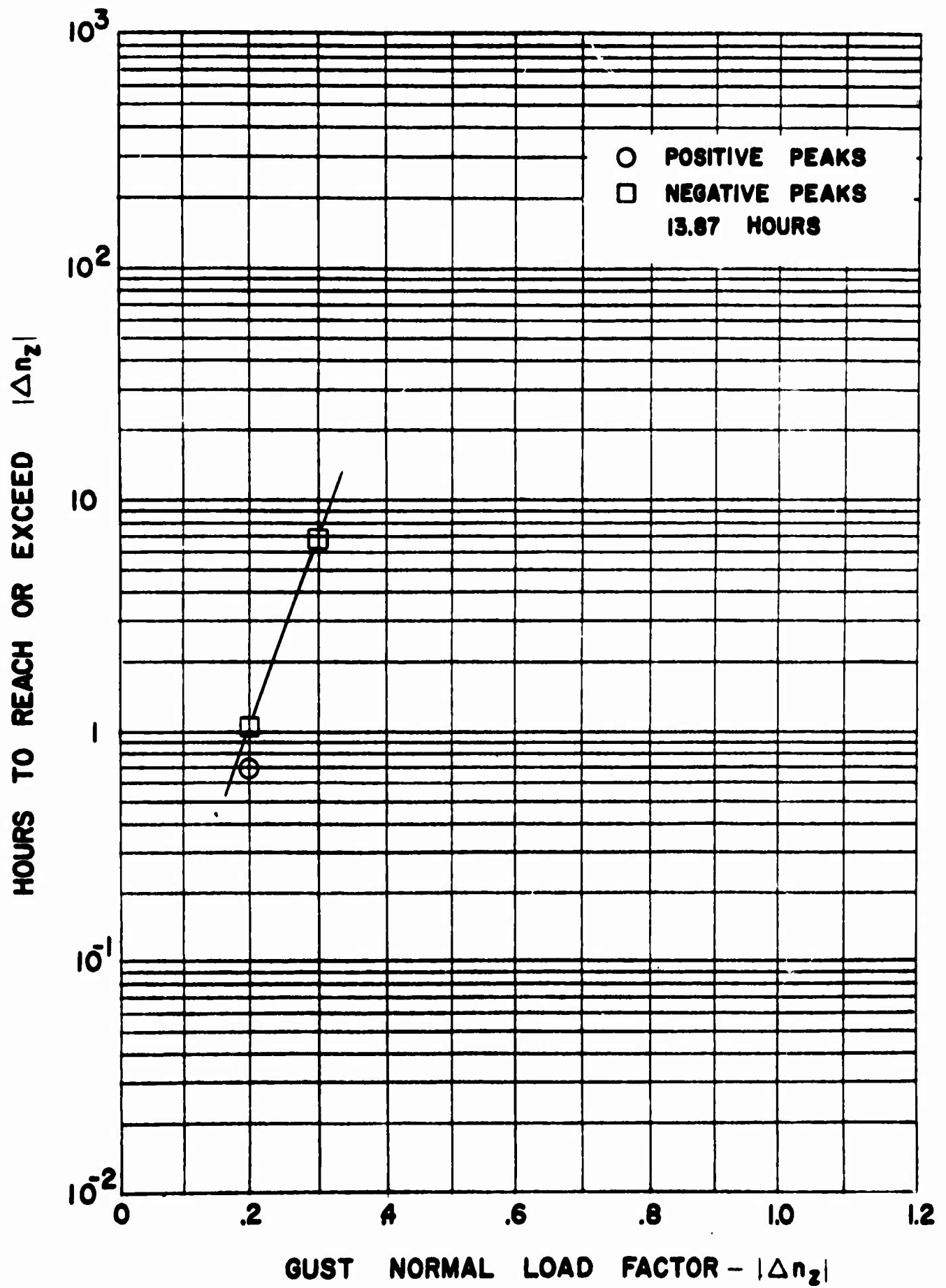


Figure 20. (c) Descent Mission Segment.

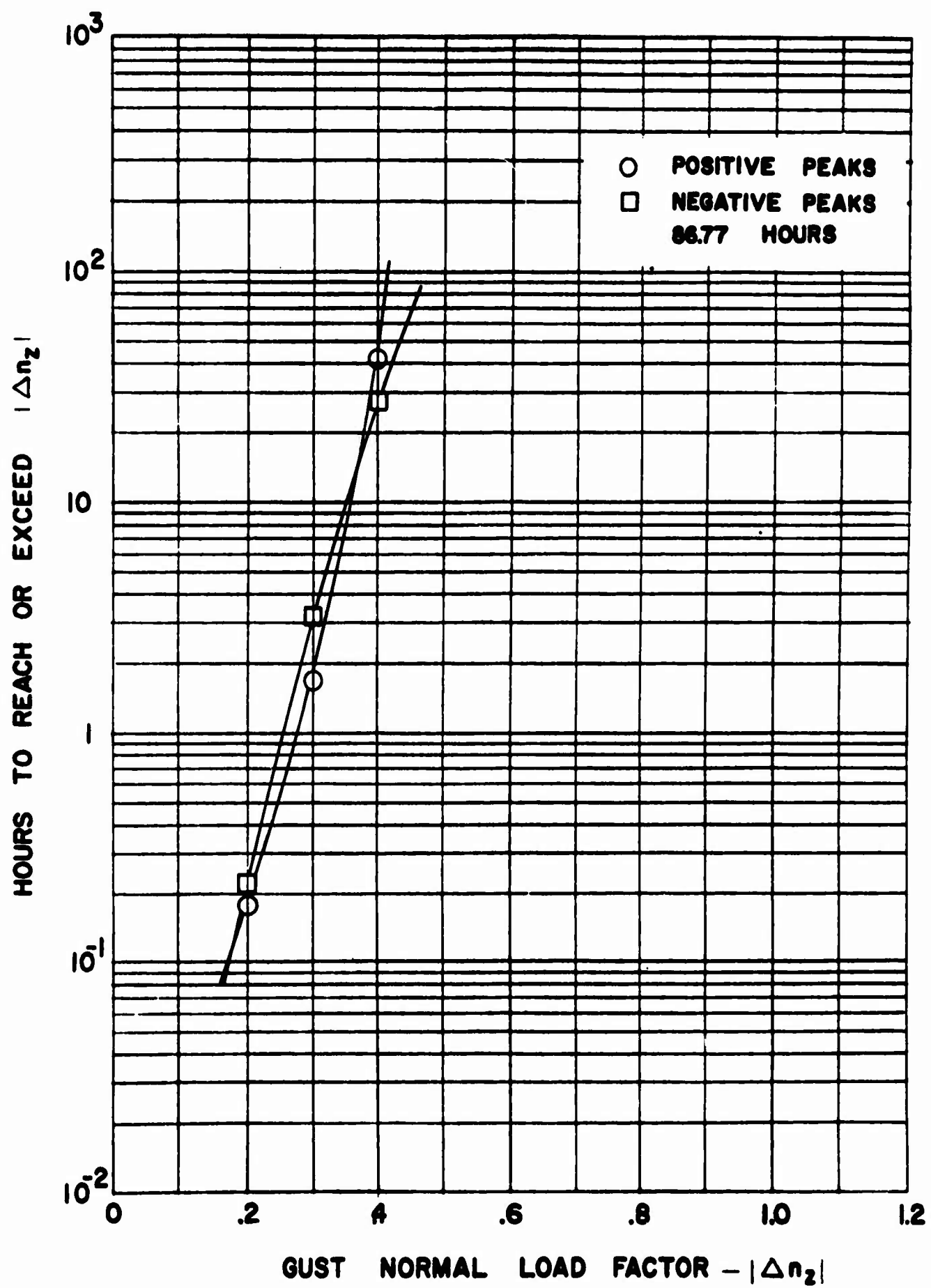


Figure 20. (d) Steady-State Mission Segment.

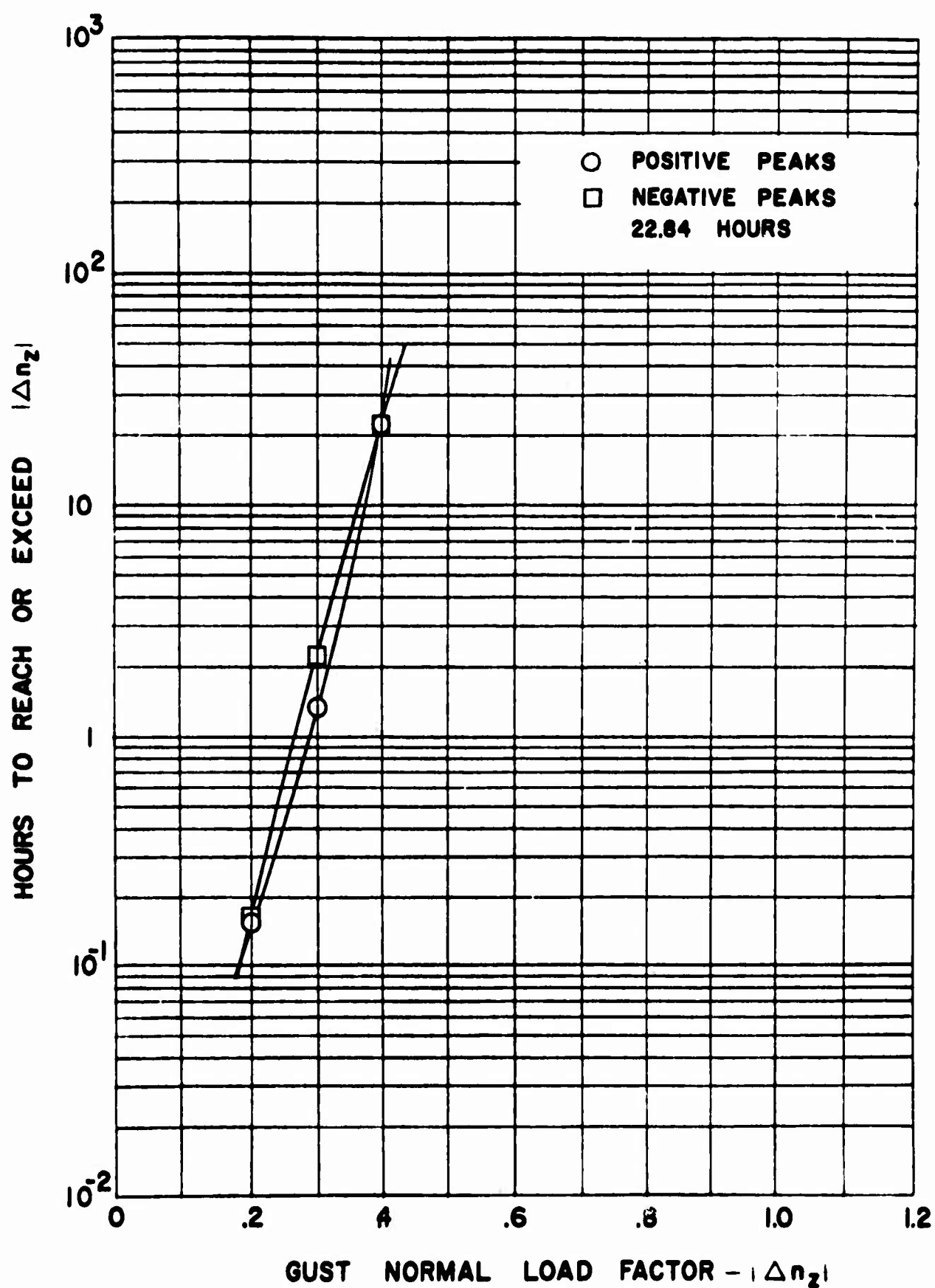


Figure 21. Exceedance Curves for Incremental Gust Normal Load Factor Peaks by Gross Weight Range .

(a) Gross Weight Less Than 26,000 Pounds.

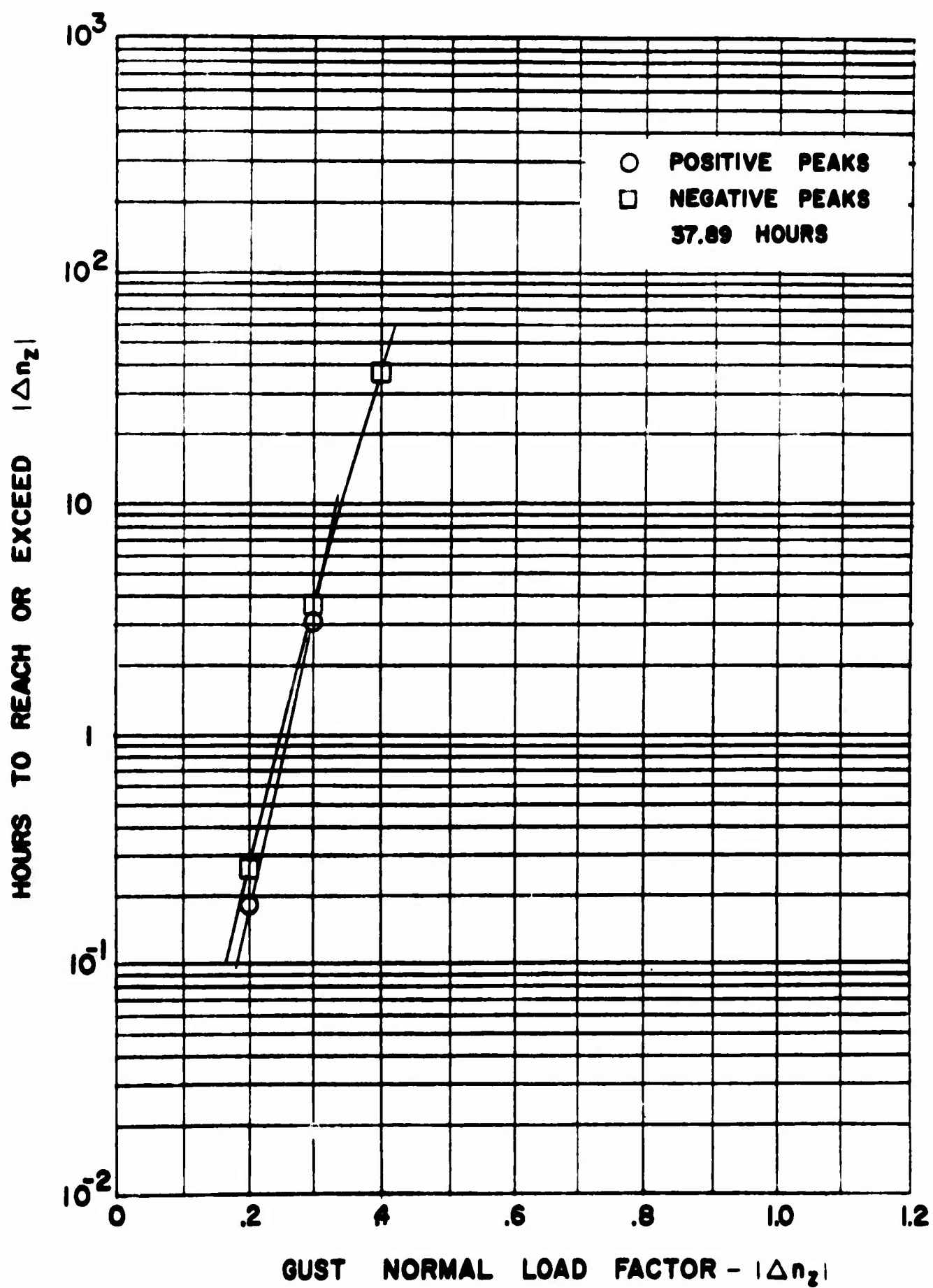


Figure 21. (b) Gross Weight 26,000 to 30,000 Pounds.

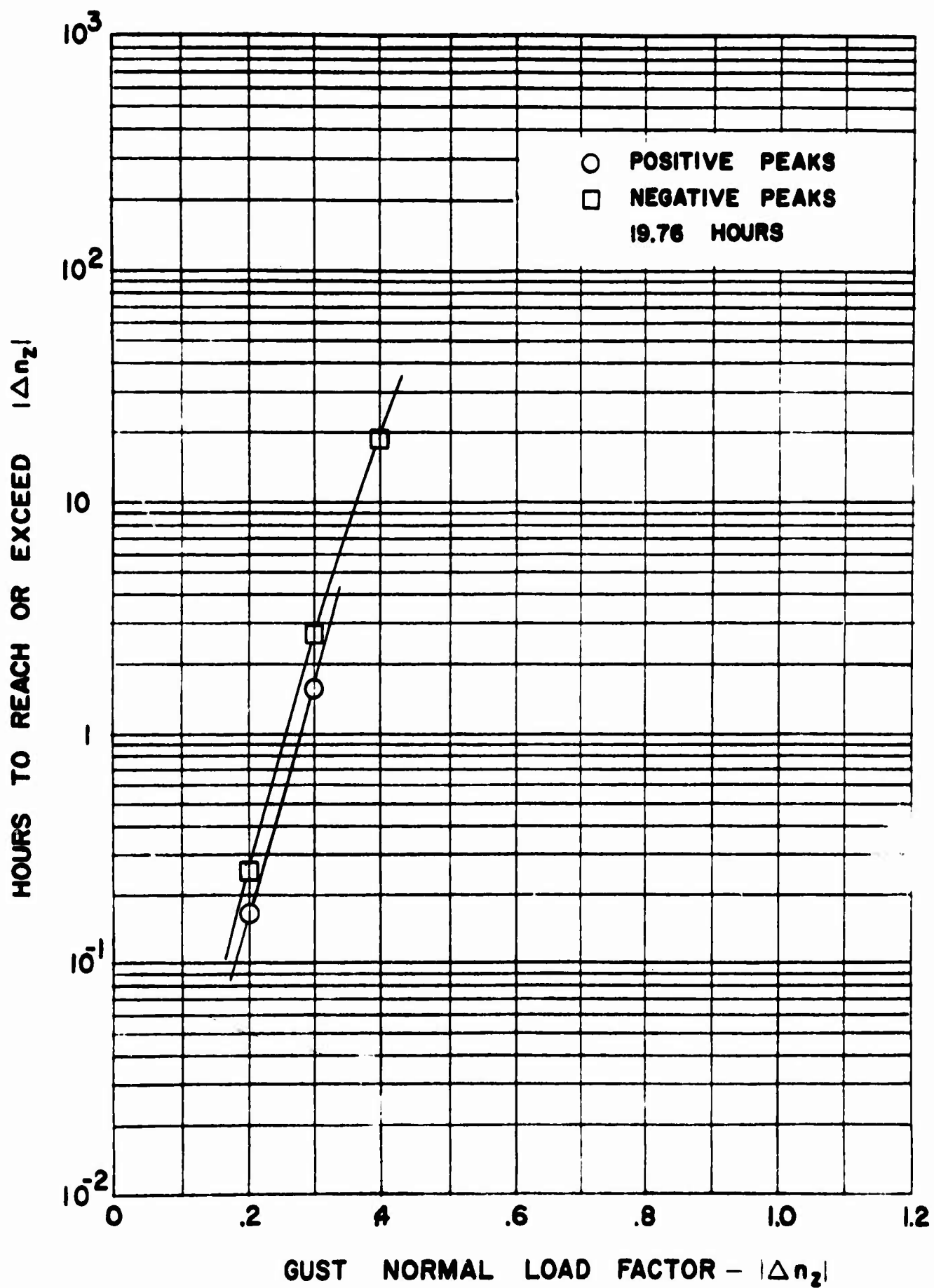


Figure 21. (c) Gross Weight 30,000 to 34,000 Pounds.

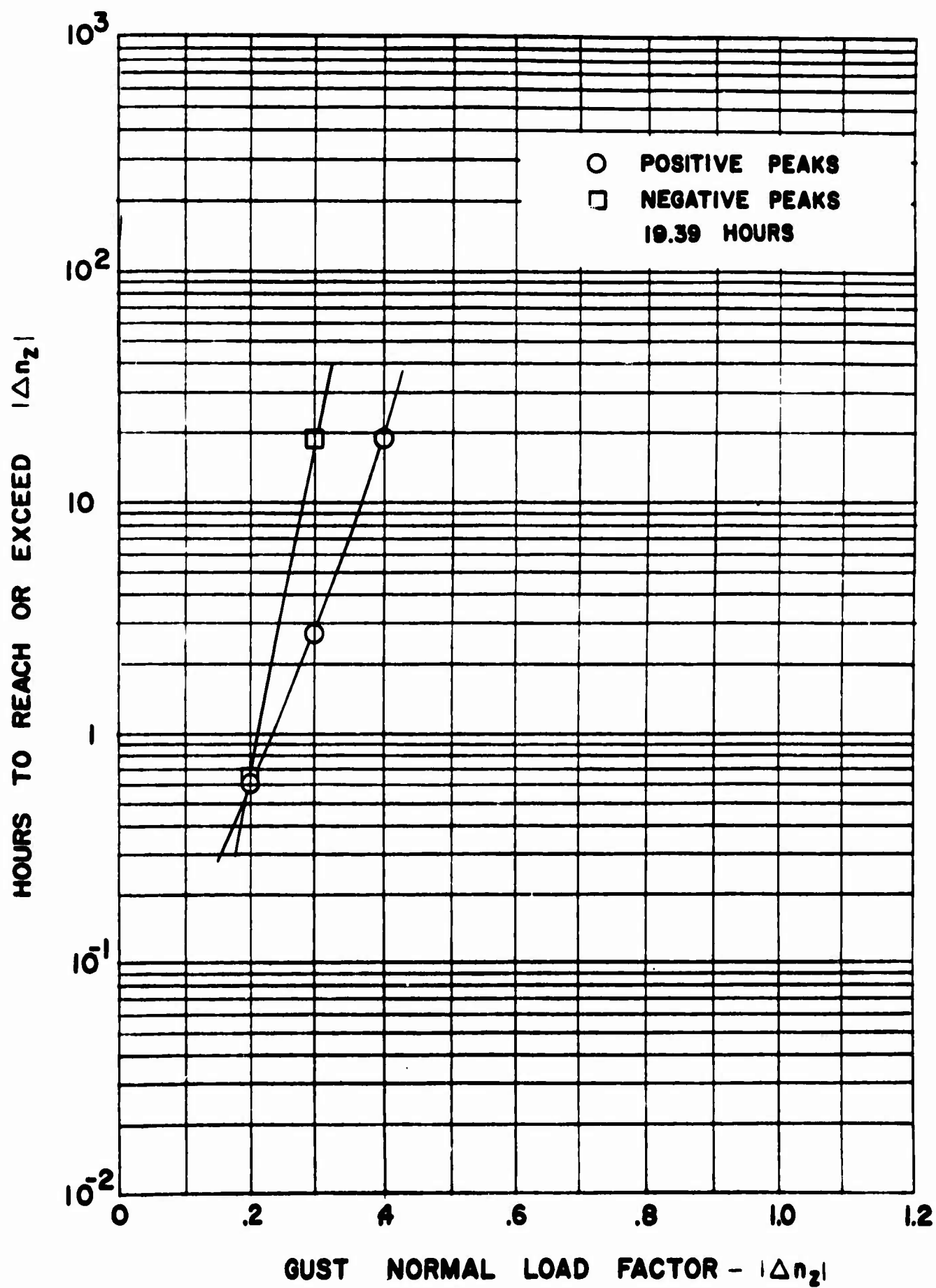


Figure 21. (d) Gross Weight 34,000 to 38,000 Pounds.

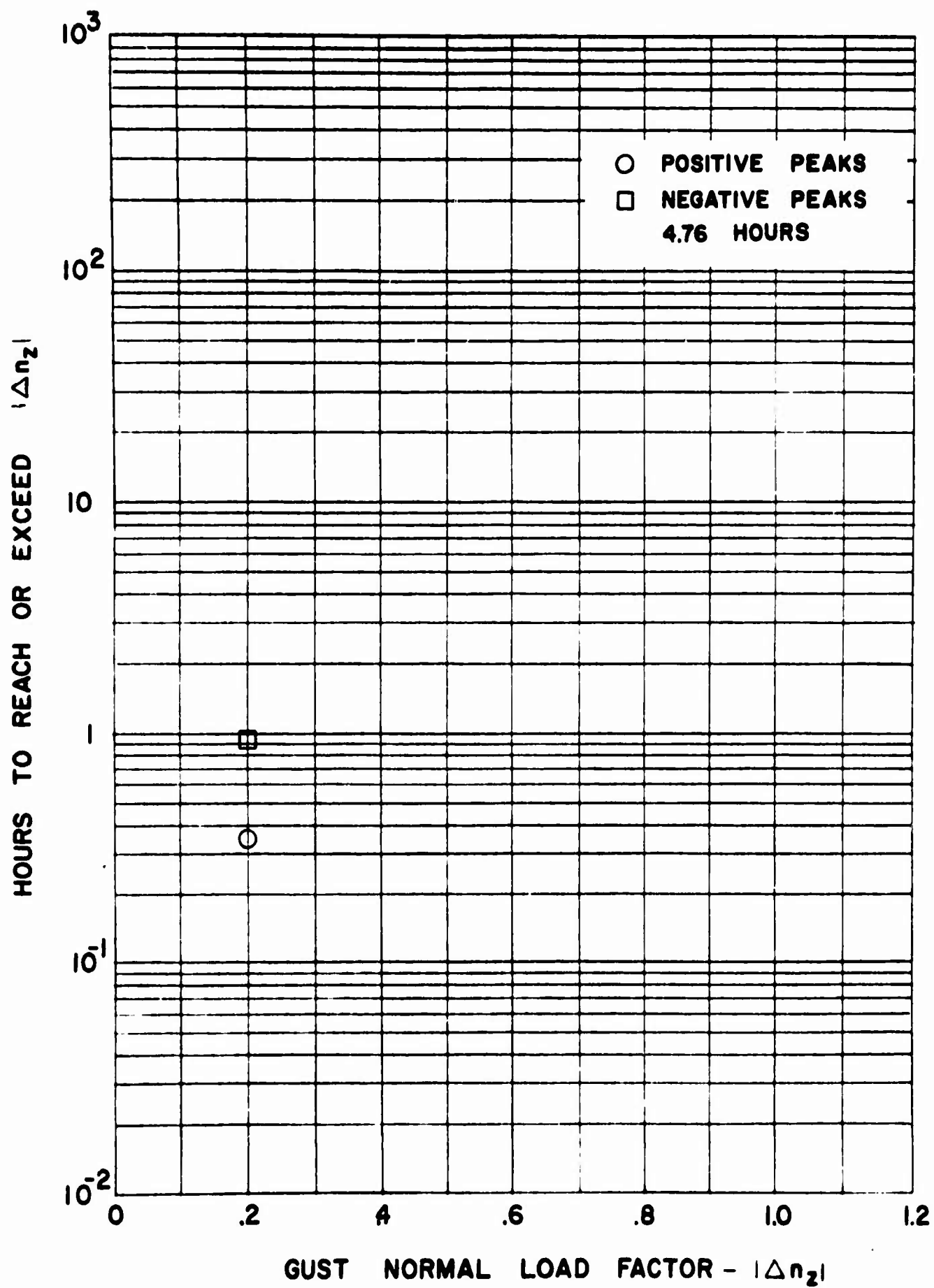


Figure 21. (e) Gross Weight 38,000 to 42,000 Pounds.

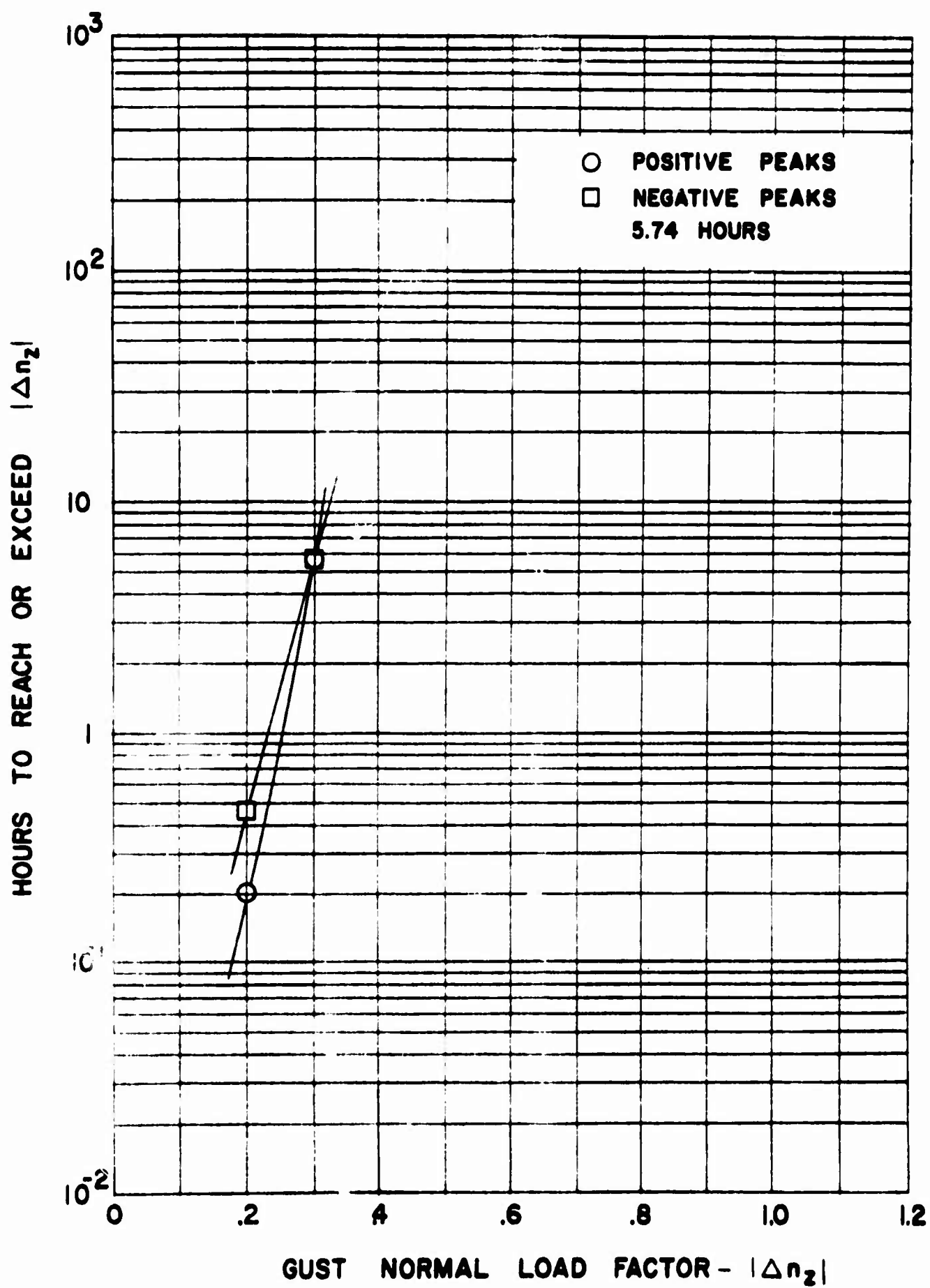


Figure 21. (f) Gross Weight Over 42,000 Pounds.

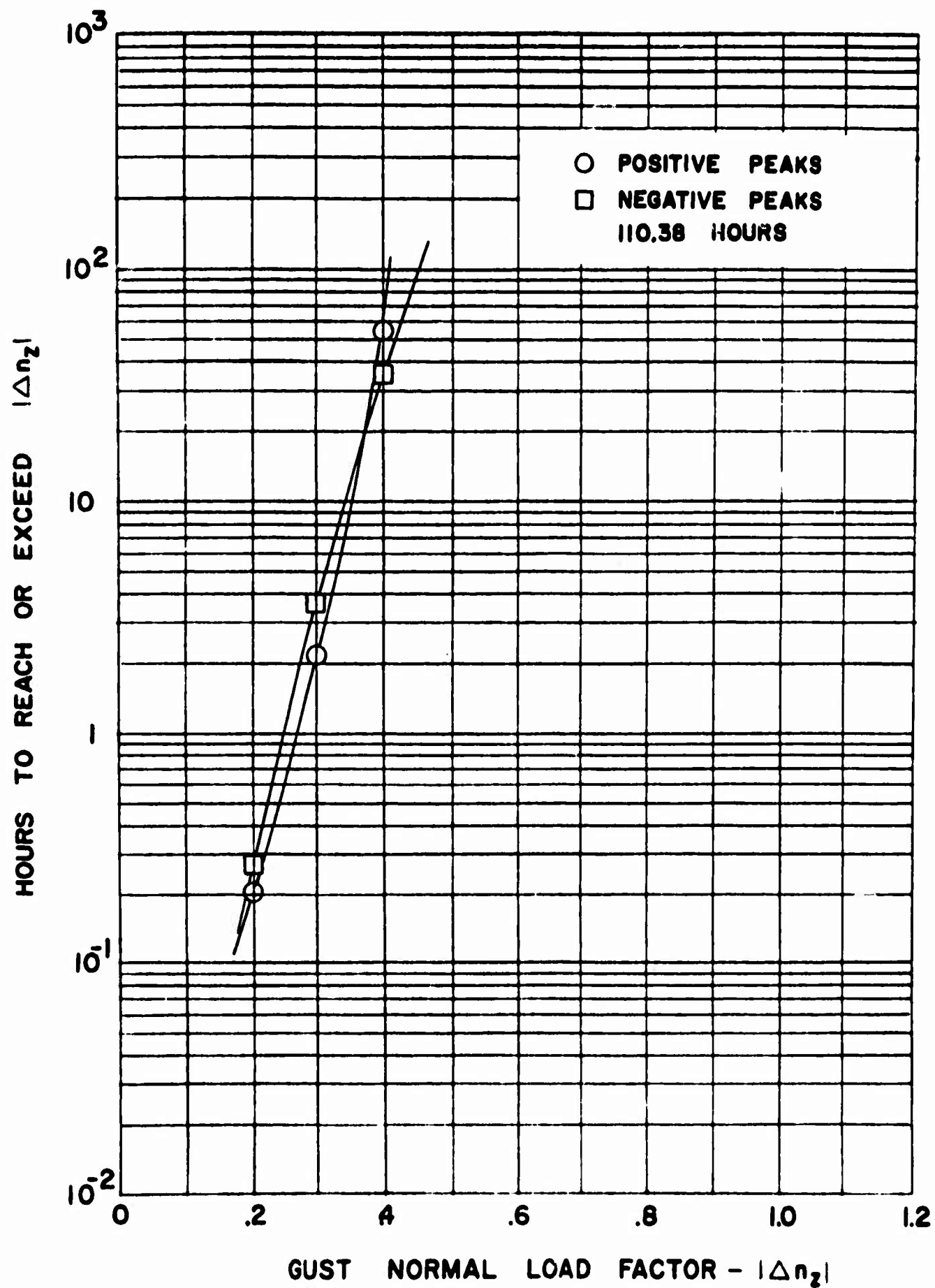
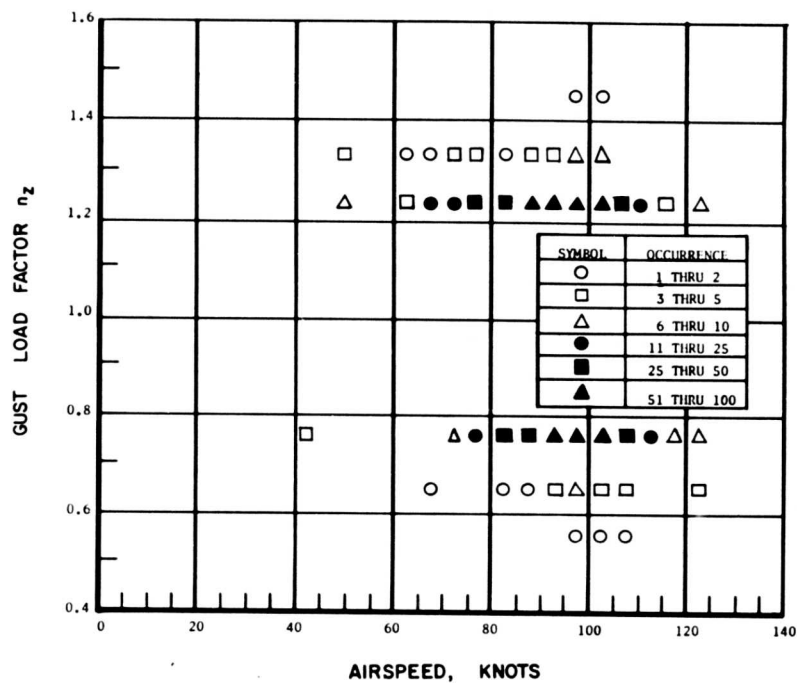


Figure 22. Exceedance Curves for Incremental Gust Normal Load Factor Peaks, Composite.



GUST LOAD FACTOR n_z	AIRSPEED, KNOTS														TOTAL n_z
	40 TO 60	60 TO 65	65 TO 70	70 TO 75	75 TO 80	80 TO 85	85 TO 90	90 TO 95	95 TO 100	100 TO 105	105 TO 110	110 TO 115	115 TO 120	120 TO 125	
1.5 TO 1.6															
1.4 TO 1.5									1	1					2
1.3 TO 1.4	3	1	2	3	4	1	3	5	6	10	8				46
1.2 TO 1.3	6	4	14	12	47	38	55	73	76	77	37	21	5	8	473
0.8 TO 1.2															
0.7 TO 0.8	4			7	19	30	47	68	51	58	39	21	8	10	362
0.6 TO 0.7			1			1	1	4	7	3	5			4	26
0.5 TO 0.6									1	1	1				3
0.4 TO 0.5															
TOTAL	13	5	17	22	70	70	106	150	142	150	90	42	13	22	912

Figure 23. Diagram and Tabulation of Gust Normal Load Factor Peaks in Ranges of Indicated Airspeed.

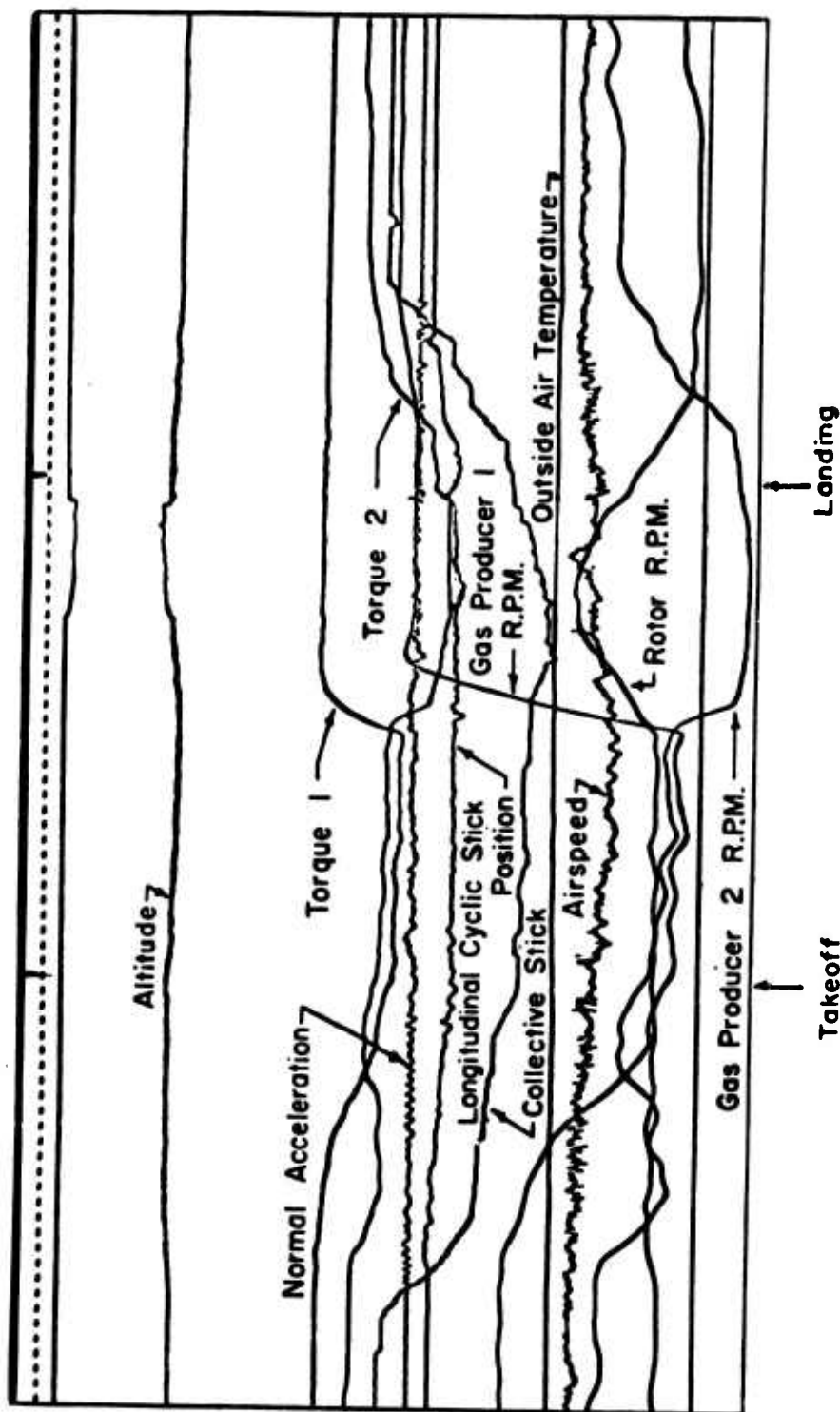


Figure 24. Oscillogram Showing a Practice Landing With One Engine Out.

CONCLUSIONS

It is concluded that:

1. Since the 110 hours of data collected were short of the 200-hour goal, the results do not possess the desired level of confidence. However, the data collected are valuable in that they represent a majority of the flight hours logged by four CH-54A helicopters of the 478th Flying Crane Company from 4 February 1965 to 27 July 1965. These logged flight hours essentially represent the total operational use of the CH-54A aircraft during this period.
2. The preliminary analysis revealed that no flight conditions encountered were above 110 knots, 38,000 pounds, and a density altitude of 1,000 feet. The highest maneuver load factor peak was 1.57, and the highest gust load factor was 1.47. The most severe gust environment was found to occur during the steady-state mission segment. These observed results are well within the design conditions, and indicate safe aircraft operation at all times.

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APPENDIX

INSTRUCTIONS FOR READING COMPUTER PRINTOUTS AND TABLES II THROUGH XXXIII

The range codes for all parameters are given in Table II. The codes are the lower limits of each range.

For the computer printouts, Tables III through XXXIII, all times are given in minutes unless otherwise specified. Since times have been rounded off to the nearest tenth of a minute, time history tables which were added before rounding occurred may disagree with the sum of the rounded values by some fraction of a minute. The following method assures that any value shown is within 0.05 minute of the correct value: a time value between 0 and up to but not including 0.05 minute was printed as "0.0", while no time measured was printed as "0".

Tables having neither points nor time were not printed.

Table headings are arranged so that the first-mentioned parameter refers to the vertical ranges at the left of the table; the second-mentioned parameter refers to the horizontal ranges at the top of the table; and whenever a third or fourth parameter is mentioned, it is followed by its range in the heading. As an example, the heading " n_z Gust Peaks Versus Velocity by Mission Segment Ascent, Altitude Less, Weight 30,000" indicates the number of gust n_z peaks in selected airspeed ranges for ascent, altitude below 1,000 feet, and weights between 30,000 and 34,000 pounds.

TABLE II
Parameter Limits

<u>Airspeed (kn)</u>		<u>Gust n_z and Maneuver n_z (g)</u>	
<u>Code</u>	<u>Range</u>	<u>Code</u>	<u>Range</u>
Less	Below 40	Less	Below 0.2
40	40 to 60	0.2	0.2 to 0.4
60	60 to 65	0.4	0.4 to 0.5
65	65 to 70	0.5	0.5 to 0.6
70	70 to 75	0.6	0.6 to 0.7
75	75 to 80	0.7	0.7 to 0.8
80	80 to 85	0.8	0.8 to 1.2
85	85 to 90	1.2	1.2 to 1.3
90	90 to 95	1.3	1.3 to 1.4
95	95 to 100	1.4	1.4 to 1.5
100	100 to 105	1.5	1.5 to 1.6
105	105 to 110	1.6	1.6 to 1.7
110	110 to 115	1.7	1.7 to 1.8
115	115 to 120	1.8	1.8 to 2.0
120	Above 120	2.0	2.0 to 2.2
		2.2	2.2 to 2.4
		2.4	Above 2.4

<u>Collective and Cyclic Stick Steady (%)</u>		<u>Temperature (°F)</u>	
<u>Code</u>	<u>Range</u>	<u>Code</u>	<u>Range</u>
Less	Below 10	Less	Below 0
10	10 to 20	0	0 to 10
20	20 to 30	10	10 to 20
30	30 to 40	20	20 to 30
40	40 to 50	30	30 to 40
50	50 to 60	40	40 to 50
60	60 to 70	50	50 to 60
70	70 to 80	60	60 to 70
80	80 to 90	70	70 to 80
90	Above 90	80	80 to 90
		90	Above 90

<u>Altitude (ft)</u>		<u>Gross Weight (lb)</u>	
<u>Code</u>	<u>Range</u>	<u>Code</u>	<u>Range</u>
Less	Below 1,000	Less	Below 26,000
1,000	1,000 to 2,000	26,000	26,000 to 30,000
2,000	2,000 to 5,000	30,000	30,000 to 34,000
5,000	5,000 to 10,000	34,000	34,000 to 38,000
10,000	10,000 to 15,000	38,000	38,000 to 42,000
15,000	Above 15,000	42,000	Above 42,000

TABLE II, contd.

Rate of Climb (ft/min)		Airspeed Acceleration (ft/sec ²)	
Code	Range	Code	Range
Less	Below -1500	Less	Below -15
-1500	-1500 to -1200	-15	-15 to -12
-1200	-1200 to -900	-12	-12 to -9
-900	-900 to -600	-9	-9 to -6
-600	-600 to -300	-6	-6 to -3
-300	-300 to 300	-3	-3 to 0
300	300 to 600	0	0 to 3
600	600 to 900	3	3 to 6
900	900 to 1200	6	6 to 9
1200	1200 to 1500	9	9 to 12
1500	Above 1500	12	12 to 15
		15	Above 15
Collective and Cyclic Stick Peaks (%)		Tip-Speed Ratio, μ	
Code	Range	Code	Range
Less	Below -40	Less	Below 0
-40	-40 to -30	0.0	0.0 to 0.5
-30	-30 to -20	0.5	0.5 to 0.10
-20	-20 to -10	0.10	0.10 to 0.15
-10	-10 to 10	0.15	0.15 to 0.20
10	10 to 20	0.20	0.20 to 0.25
20	20 to 30	0.25	0.25 to 0.30
30	30 to 40	0.30	Above 0.30
40	Above 40		
Thrust Coefficient Ratio C_T/σ		Rotor RPM	
Code	Range	Code	Range
Less	Below 0.06	Less	Below 180
0.06	0.06 to 0.09	180	180 to 185
0.09	0.09 to 0.12	185	185 to 190
0.12	0.12 to 0.15	190	190 to 195
0.15	0.15 to 0.18	195	195 to 200
0.18	0.18 to 0.21	200	200 to 205
0.21	Above 0.21	205	Above 205

TABLE III Time for Mission Segment Versus Weight							
TIME(MINUTES) FOR MISSION SEGMENT VS WEIGHT							TOTAL
	LESS	26000	30000	34000	38000	42000	TOTAL
ASCENT	109.7	126.9	62.3	80.9	30.9	44.0	454.7
MANUVR	22.0	78.5	21.9		5.1	2.3	129.8
DESCNT	240.1	223.2	131.9	134.2	46.8	53.9	832.1
STEADY	999.2	1844.9	969.3	948.2	200.9	243.9	5206.4
TOTAL	1370.9	2273.5	1185.5	1163.3	285.6	344.1	6623.0

TABLE IV Time for Altitude Versus Airspeed by Weight																
TIME(MINUTES) FOR ALTITUDE VS VELOCITY BY WEIGHT LESS																TOTAL
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
LESS	95.0	5.3	5.0	9.1	8.1	6.0	3.6	9.0	8.9	9.6	6.6	7.7	1.9	0.2		176.2
1000	119.0	4.0	8.4	6.3	16.8	18.8	22.9	20.0	17.6	17.7	13.7	7.9	1.4	0.4		274.5
2000	122.6	2.5	3.1	2.3	4.5	12.0	30.1	44.8	44.9	39.9	57.5	57.1	23.3	16.7	20.5	481.9
5000					0.5	3.9	11.1	41.5	8.1	1.5						66.6
10000																
15000																
TOTAL	336.5	11.8	16.5	17.7	30.0	40.8	67.3	115.3	79.5	68.7	77.9	72.7	26.6	17.3	20.5	999.2
TIME(MINUTES) FOR ALTITUDE VS VELOCITY BY WEIGHT 26000																TOTAL
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
LESS	221.0	25.0	16.2	20.5	24.6	20.8	19.8	26.0	26.5	34.6	28.7	11.2	4.6	2.9	1.5	479.9
1000	177.3	19.0	12.7	22.0	24.9	35.7	49.1	51.2	40.3	36.9	29.8	24.1	11.2	3.6	0.3	534.2
2000	184.9	12.6	13.4	16.5	29.8	55.0	58.7	85.5	82.2	63.7	50.5	56.5	29.0	4.9	0.1	743.3
5000	0.3			0.2	0.6	0.9	4.2	14.1	0.9	1.9	9.4	36.1	19.0			87.5
10000																
15000																
TOTAL	583.5	56.6	42.4	59.3	79.8	112.3	127.8	176.9	150.0	137.1	114.4	127.9	63.8	11.4	1.9	1844.9
TIME(MINUTES) FOR ALTITUDE VS VELOCITY BY WEIGHT 30000																TOTAL
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
LESS	67.5	3.5	4.8	8.1	12.9	14.7	16.6	16.0	13.0	7.9	6.3	27.0	24.8	0.5		223.8
1000	40.8	13.4	8.7	9.5	4.9	8.7	9.7	19.0	7.3	8.8	39.2	60.1	55.1	9.5		290.8
2000	25.5	9.9	9.5	14.2	22.9	28.2	45.1	82.9	68.1	51.1	39.5	23.2	4.8	3.5	0.1	428.6
5000								0.4	0.4	2.7	7.2	13.7	1.8			26.2
10000																
15000																
TOTAL	133.9	26.8	23.0	27.8	40.7	51.6	71.4	118.4	88.8	70.6	92.2	124.1	86.5	13.5	0.1	969.3
TIME(MINUTES) FOR ALTITUDE VS VELOCITY BY WEIGHT 34000																TOTAL
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
LESS	37.4	5.1	2.2	6.4	6.2	12.4	9.4	9.3	6.8	5.4	6.7	31.5	21.0	0.8		160.7
1000	80.1	8.7	4.9	9.0	10.5	14.0	24.1	26.4	34.0	39.8	44.9	24.4	7.7			328.4
2000	54.3	9.6	18.2	16.2	12.1	17.3	24.7	46.7	72.5	71.8	57.3	49.4	9.0			459.0
5000																
10000																
15000																
TOTAL	171.8	23.4	25.3	31.6	28.9	43.6	58.3	82.4	113.3	117.0	108.9	105.3	37.6	0.8		948.2

TABLE IV, contd.

TIME(MINUTES) FOR ALTITUDE VS VELOCITY BY WEIGHT 3800G																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
LESS	4.1	0.2	0.2	0.2	1.5	6.6	5.1	1.2	1.7	1.4	0.6	0.3	2.4	2.5	0.3	28.4
1000	13.9	1.1	4.3	1.0	1.8	2.1	3.7	8.1	17.9	6.0	0.3					66.0
2000	13.9	1.2	2.0	3.1	7.9	11.9	10.2	17.6	14.4	8.9	10.5	1.9				103.4
5000				0.1	0.1	0.5	1.4	0.6	0.5							3.1
10000																
15000																
TOTAL	31.9	2.4	6.5	4.4	11.2	21.0	20.4	27.5	34.4	16.4	11.4	2.2	2.4	2.5	0.3	200.9

TIME(MINUTES) FOR ALTITUDE VS VELOCITY BY WEIGHT 4200G																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
LESS	31.8	4.4	4.3	5.8	4.5	3.1	4.0	2.1	3.7	2.5	0.1	0.3	0.2			66.7
1000	22.3	1.1	3.2	4.9	10.2	13.5	11.9	7.3	9.1	6.5	7.7	1.3				99.1
2000	14.4	0.9	0.8	1.9	1.4	10.8	11.4	20.9	8.9	6.4	0.2					78.1
5000																
10000																
15000																
TOTAL	64.5	6.4	8.3	12.7	16.2	27.4	27.7	30.3	21.8	15.5	8.0	1.5	0.2			243.9

TIME(MINUTES) FOR ALTITUDE VS VELOCITY BY WEIGHT TOTAL																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
LESS	456.8	43.4	32.8	50.1	57.9	63.6	54.5	63.8	60.7	61.5	49.0	78.0	54.9	7.0	1.4	1135.6
1000	453.4	53.3	42.2	48.8	69.1	47.7	121.1	132.0	126.2	115.8	131.5	117.8	75.3	13.5	0.3	1943.0
2000	415.7	16.8	47.0	54.2	78.6	135.1	180.2	298.4	231.0	241.8	215.6	188.0	66.1	25.1	20.7	2294.1
5000	0.3		0.3	1.2	5.2	16.7	56.6	5.8	6.1	16.6	49.8	20.4				193.4
10000																
15000																
TOTAL	1326.1	113.5	122.0	153.4	206.8	296.7	372.5	550.8	487.7	425.3	412.7	433.7	217.1	45.6	22.8	5206.4

TABLE V
Time for Collective Stick Position Versus Cyclic
Stick Position by Rate of Climb

TIME(MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB											
LESS	10	20	30	40	50	60	70	80	90	TOTAL	
LESS											
10											
20											
30					0.2					0.2	
40			0.1							0.1	
50											
60											
70											
80											
90											
TOTAL			0.1		0.2					0.3	

TABLE V, contd.

TIME(MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB -1500											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20					0.2						0.2
30											
40				0.1							0.1
50											
60											
70											
80											
90											
TOTAL				0.1	0.2						0.3

TIME(MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB -1200											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20				0.1	0.7						0.8
30			0.3	0.5							0.8
40			0.3								0.3
50		0.1	0.2		0.3						0.6
60											
70											
80											
90											
TOTAL		0.1	0.8	0.6	1.0						2.5

TIME(MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB -900											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20			0.3		0.5	0.1					0.9
30	0.1		2.8	1.4	1.8	0.7	0.2				7.0
40		0.7	1.1	2.0	2.2	0.1					6.1
50		0.3	1.1	0.6	0.3	0.1					2.4
60		0.1	0.1		0.1						0.3
70											
80											
90											
TOTAL	0.1	1.1	5.3	4.0	4.8	1.0	0.2				16.6

TABLE V, contd.

TIME(MINUTES) FOR COLLECTIVE VS. CYCLIC BY CLIMB -600											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20		0.2	2.2	0.5	2.7	1.4					7.0
30		2.1	7.7	10.3	11.1	5.5	0.8				37.4
40	1.9	6.1	8.7	26.8	13.4	3.8	0.2				61.0
50	2.3	6.0	18.7	11.1	4.3	1.5	0.4				44.2
60		0.3	3.2	0.1	0.2	0.4					4.3
70											
80											
90											
TOTAL	4.2	14.7	40.6	48.8	31.6	12.6	1.5				153.9

TIME(MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB -300											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20			0.4	5.0	26.5	11.7	1.4				44.9
30	0.6	4.6	30.7	89.5	186.5	224.4	22.5				558.8
40	87.5	64.8	128.1	777.3	520.1	409.8	79.6	1.4			2068.6
50	75.6	156.0	709.9	533.1	248.7	118.9	10.1				1852.3
60	2.6	9.3	62.8	38.2	24.0	46.1	4.2				187.3
70				0.1							0.1
80											
90											
TOTAL	166.3	234.8	931.9	1443.2	1005.9	810.9	117.7	1.4			4712.0

TIME(MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB 300											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20					0.3						0.3
30		0.5	0.9	3.3	6.4	7.1					18.2
40	1.9	6.5	6.6	33.0	23.3	11.5	0.4				83.2
50	4.3	12.1	34.6	36.7	14.7	1.0	0.3				103.7
60	0.8	2.6	6.9	6.4	7.0	0.5					19.2
70											
80											
90											
TOTAL	7.0	21.7	48.9	79.5	46.7	20.1	0.7				224.6

TIME(MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB 600											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20											
30			0.4	1.8	0.8	0.9					3.9
40		3.4	2.4	11.0	6.3	2.7	0.1				25.9
50	2.1	6.0	6.1	12.2	5.4	0.8					32.7
60	0.1	1.7	2.7	1.1	0.4	0.1					6.2
70											
80											
90											
TOTAL	2.2	11.1	11.6	26.1	12.9	4.6	0.1				68.6

TABLE V, contd.

TIME (MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB 900											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20											
30					0.2						0.2
40		2.5	0.5	3.7	1.3	0.4					8.4
50	0.5	0.5	2.8	5.1	1.9						10.8
60		0.2	0.2		0.1	0.2					0.8
70											
80											
90											
TOTAL	0.5	3.2	3.5	8.8	3.5	0.6					20.2

TIME (MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB 1200											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20											
30			0.5								0.5
40				0.5	1.5						2.0
50		0.5	0.5	1.5	0.3						2.9
60			0.1			0.2					0.3
70											
80											
90											
TOTAL		0.5	1.1	2.1	1.8	0.2					5.7

TIME (MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB 1500											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20											
30				0.5							0.5
40				0.4							0.4
50				0.5	0.2						0.7
60											
70											
80											
90											
TOTAL				1.4	0.2						1.6

TIME (MINUTES) FOR COLLECTIVE VS CYCLIC BY CLIMB TOTAL											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
10											
20		0.2	2.9	5.6	30.9	13.2	1.4				54.1
30	0.7	7.2	43.2	107.3	206.7	238.7	23.5				627.4
40	91.3	84.0	147.7	854.9	568.1	428.3	80.4	1.4			2256.1
50	84.7	181.6	773.8	601.0	276.1	122.3	10.8				2050.3
60	3.6	14.2	76.1	45.8	26.9	47.6	4.2				218.4
70				0.1							0.1
80											
90											
TOTAL	180.3	287.2	1043.7	1614.7	1108.8	850.1	120.2	1.4			5206.4

TABLE VI
Time for Rotor RPM Versus Rate of Climb by
Outside Air Temperature

TIME(MINUTES) FOR RPM VS CLIMB BY TEMPERATURE 30											
LESS	-1500	-1200	-900	-600	-300	300	600	900	1200	1500	TOTAL
180				0.6	1.6						2.2
185			0.4	0.8	39.5	2.4	0.5				43.7
190			0.8		25.3	1.7	0.9				28.7
195											
200											
205											
TOTAL			1.2	1.4	66.4	4.1	1.4				74.6

TIME(MINUTES) FOR RPM VS CLIMB BY TEMPERATURE 40											
LESS	-1500	-1200	-900	-600	-300	300	600	900	1200	1500	TOTAL
180			0.1	0.3	35.4	1.9	0.1				37.8
185				6.2	167.8	4.5	1.1	0.8	0.3		180.7
190	0.1	0.7	1.4	7.5	158.5	9.6	0.8	0.8		0.1	179.6
195					0.1						0.1
200											
205											
TOTAL	0.1	0.7	1.5	14.0	361.8	16.0	2.1	1.6	0.3	0.1	398.2

TIME(MINUTES) FOR RPM VS CLIMB BY TEMPERATURE 50											
LESS	-1500	-1200	-900	-600	-300	300	600	900	1200	1500	TOTAL
180			0.5	5.7	287.7	9.0	1.3		0.1		304.2
185			0.6	4.0	305.4	11.7	1.6	1.2	0.3	0.2	325.1
190			0.7	9.7	214.9	16.6	3.7	3.8	1.5	0.3	251.2
195				2.2	7.3	0.3	0.9	0.9	0.2		11.7
200					1.1						1.1
205											
TOTAL			1.7	21.6	816.3	37.6	7.5	5.9	2.1	0.5	893.3

TIME(MINUTES) FOR RPM VS CLIMB BY TEMPERATURE 60											
LESS	-1500	-1200	-900	-600	-300	300	600	900	1200	1500	TOTAL
180				0.1	0.4	0.3					0.8
185				3.4	197.3	10.5	1.2	0.3	0.1		212.9
190	0.2	0.3	0.3	1.8	22.1	684.4	31.6	9.1	2.2	0.3	751.9
195				3.6	27.8	412.1	25.5	11.9	1.7	0.6	484.4
200					0.2	13.7	0.3				14.1
205						2.3	0.3				2.5
TOTAL	0.2	0.3	0.6	5.5	53.7	1310.2	68.4	22.2	4.2	0.9	1466.6

TIME(MINUTES) FOR RPM VS CLIMB BY TEMPERATURE 70											
LESS	-1500	-1200	-900	-600	-300	300	600	900	1200	1500	TOTAL
180					1.3	0.2					1.6
185				2.4	150.3	7.3	1.1	0.2	0.6		162.0
190		0.1	2.4	22.2	828.7	35.9	9.2	1.7	0.8		900.9
195		1.0	3.1	15.9	328.1	13.8	7.1	2.5	0.8	0.2	372.4
200			0.1		10.8	0.4	0.3				11.6
205			0.1		0.2						0.3
TOTAL		1.1	5.6	40.4	1319.4	57.7	17.6	4.3	2.2	0.2	1448.6

TABLE VI, contd.

TIME(MINUTES) FOR RPM VS CLIMB BY TEMPERATURE 80												
LESS	LESS	-1500	-1200	-900	-600	-300	300	600	900	1200	1500	TOTAL
			0.1		0.1	7.9		0.1	0.1			8.2
180				0.2	4.5	179.6	8.9	2.7	0.6	0.1	0.1	196.7
185				0.3	11.9	420.7	22.4	6.9	2.4		0.3	464.9
190				0.1	1.9	46.1	0.7	1.7	0.9			51.5
195						1.5						1.5
200												
205												
TOTAL			0.1	0.6	18.4	655.8	31.9	11.4	4.1	0.1	0.4	722.8

TIME(MINUTES) FOR RPM VS CLIMB BY TEMPERATURE 90												
LESS	LESS	-1500	-1200	-900	-600	-300	300	600	900	1200	1500	TOTAL
					0.1	0.2	0.2	0.1				0.5
180					1.5	46.1	3.4	3.5		0.1		54.7
185				0.3	2.7	120.4	4.4	2.7	0.1			130.5
190				0.1	0.2	14.8	0.8	0.1				16.0
195						0.5						0.5
200						0.2						0.2
205												
TOTAL				0.4	4.4	182.1	8.8	6.3	0.1	0.1		202.3

TIME(MINUTES) FOR RPM VS CLIMB BY TEMPERATURE TOTAL												
LESS	LESS	-1500	-1200	-900	-600	-300	300	600	900	1200	1500	TOTAL
			0.1		0.2	9.8	0.7	0.2	0.1			11.1
180				0.9	18.3	898.1	41.0	10.0	1.1	1.0	0.1	970.5
185			0.4	5.8	69.9	2566.8	112.9	31.1	8.3	1.8	0.5	2757.6
190	0.3	0.3	2.0	9.7	63.1	1199.7	68.8	26.2	9.8	2.8	1.0	1383.7
195				0.1	2.4	33.8	1.0	1.1	0.9	0.2		39.5
200				0.1		3.7	0.3					4.1
205												
TOTAL	0.3	0.3	2.5	16.6	153.9	4712.0	224.6	68.6	20.2	5.7	1.6	5206.4

TABLE VII
Time for $\frac{C_T}{\sigma}$ Versus μ by Rate of Climb

TIME (MINUTES) FOR C_T/S VERSUS μ BY CLIMB LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
0.06					0.2	0.1		0.3	
0.09									
0.12									
0.15									
0.18									
0.21									
TOTAL					0.2	0.1		0.3	

TIME (MINUTES) FOR C_T/S VERSUS μ BY CLIMB -1500									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
0.06					0.1	0.1		0.2	
0.09				0.1				0.1	
0.12									
0.15									
0.18									
0.21									
TOTAL				0.1	0.1	0.1		0.3	

TIME (MINUTES) FOR C_T/S VERSUS μ BY CLIMB -1200									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
0.06				0.7				0.7	
0.09	0.1		0.3	1.1	0.2	0.2		1.8	
0.12									
0.15									
0.18									
0.21									
TOTAL	0.1		0.3	1.8	0.2	0.2		2.5	

TIME (MINUTES) FOR C_T/S VERSUS μ BY CLIMB -900									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
0.06				0.3	0.2			0.5	
0.09	0.6		0.8	6.2	6.6	0.9	0.1	15.2	
0.12	0.1		0.3	0.2	0.3			1.0	
0.15									
0.18									
0.21									
TOTAL	0.7		1.1	6.7	7.1	0.9	0.1	16.6	

TABLE VII, contd.

TIME(MINUTES) FOR CT/S VERSUS MU BY CLIMB -600									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
LESS		1.3	0.1	0.9	5.8	4.7	0.7		13.5
0.06	0.2	5.3	3.9	8.3	33.1	41.6	20.3	0.7	113.4
0.09		2.3	0.7	4.1	8.2	9.8	1.9		27.1
0.12									
0.15									
0.18									
0.21									
TOTAL	0.2	8.9	4.7	13.3	47.1	56.1	22.9	0.7	153.9

TIME(MINUTES) FOR CT/S VERSUS MU BY CLIMB -300									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
LESS		4.1	89.1	24.1	10.4	54.2	109.0	20.0	1.4 312.3
0.06	37.1	827.9	110.9	104.2	594.0	1104.1	576.0	4.5	3358.8
0.09	2.5	154.0	28.6	35.3	212.0	466.3	142.2		1040.8
0.12									
0.15									
0.18									
0.21									
TOTAL	43.8	1070.9	163.6	149.9	860.1	1679.4	738.2	6.0	4712.0

TIME(MINUTES) FOR CT/S VERSUS MU BY CLIMB 300									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
LESS		1.0	0.7	0.9	7.8	7.5			17.8
0.06		11.4	8.5	12.5	47.1	71.3	13.3	0.3	164.3
0.09		2.8	1.2	3.0	15.7	16.6	3.2		42.5
0.12									
0.15									
0.18									
0.21									
TOTAL		15.1	10.3	16.4	70.6	95.5	16.5	0.3	224.6

TIME(MINUTES) FOR CT/S VERSUS MU BY CLIMB 600									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
LESS		0.1	0.3	1.4	4.0	1.0			6.8
0.06	0.8	3.8	3.3	7.8	22.2	10.8	1.7		50.4
0.09		0.9	0.2	1.1	6.0	2.9	0.3		11.5
0.12									
0.15									
0.18									
0.21									
TOTAL	0.8	4.8	3.8	10.3	32.2	14.6	2.1		68.6

TABLE VII, contd.

TIME(MINUTES) FOR CT/S VERSUS MU BY CLIMB 900									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
0.06	0.7	1.1	0.5	0.4	3.8	0.4		0.9	
0.09	0.2	0.6	4.4	6.7	0.6			17.1	
0.12			0.5	0.3				2.2	
0.15									
0.18									
0.21									
TOTAL	0.9	1.7	5.4	7.4	4.4	0.4		20.2	

TIME(MINUTES) FOR CT/S VERSUS MU BY CLIMB 1200									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
0.06	0.2		0.1					0.2	
0.09	0.5	0.5	1.5	1.4	0.7	0.2		4.7	
0.12			0.5	0.2	0.1			0.8	
0.15									
0.18									
0.21									
TOTAL	0.6	0.5	2.0	1.7	0.8	0.2		5.7	

TIME(MINUTES) FOR CT/S VERSUS MU BY CLIMB 1500									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
0.06				0.4	0.1			0.5	
0.09			0.1	1.0	0.1			1.1	
0.12									
0.15									
0.18									
0.21									
TOTAL			0.1	1.4	0.2			1.6	

TIME(MINUTES) FOR CT/S VERSUS MU BY CLIMB TOTAL									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
0.06	4.1	91.6	25.2	14.0	73.5	122.5	20.7	1.4	353.1
0.09	38.2	850.2	128.1	139.9	712.7	1239.3	613.2	5.7	3727.3
0.12	2.5	160.2	31.4	44.9	242.8	496.5	147.6		1126.0
0.15									
0.18									
0.21									
TOTAL	44.9	1102.0	184.7	198.8	1029.0	1858.4	781.6	7.1	5206.4

TABLE VIII
Cyclic Stick Peaks Versus Cyclic Stick Steady
by Collective Stick Steady

CYCLIC PEAKS VS CYCLIC STEADY BY COLL. STEADY 20											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30											
-20							1				1
-10						5					5
10						3					3
20											
30											
40											
TOTAL						8	1				9
TIME	0.	0.2	2.9	5.6	30.9	13.2	1.4	0.	C.	0.	54.1

CYCLIC PEAKS VS CYCLIC STEADY BY COLL. STEADY 30											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30						1					1
-20			1	1		5					7
-10			2	6	6	8					22
10		1	3	6	6	12					28
20											
30											
40											
TOTAL		1	6	13	12	26					58
TIME	0.7	7.2	43.2	107.3	206.7	238.7	23.5	0.	C.	0.	627.4

CYCLIC PEAKS VS CYCLIC STEADY BY COLL. STEADY 40											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30					1	2	3				6
-20		3	1	3	12	17	3				39
-10	1		5	15	23	23	2				69
10	2	1	7	16	6	13	3				44
20		1			2	1					4
30											
40											
TOTAL	3	5	13	34	44	56	11				166
TIME	91.3	84.0	147.7	854.9	568.1	428.3	80.4	1.4	C.	0.	2256.1

TABLE VIII, contd.

CYCLIC PEAKS VS CYCLIC STEADY BY COLL. STEADY 50											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30					5						5
-20			1	2	32	1	1				37
-10		1	6	12	20	9					48
10	1	2	3	5	12	2					25
20											
30											
40				1							1
TOTAL	1	3	10	20	69	12	1				116
TIME	84.7	181.6	773.8	601.0	276.1	122.3	10.8	0.	C.	0.	2050.3
CYCLIC PEAKS VS CYCLIC STEADY BY COLL. STEADY 60											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20				1	1	2					4
-10		1		1	2	2					6
10						1					1
20			1								1
30											
40											
TOTAL		1	1	2	3	5					12
TIME	3.6	14.2	76.1	45.8	26.9	47.6	4.2	0.	C.	0.	218.4

TABLE IX
Cyclic Stick Peaks Versus Cyclic Stick
Steady by Density Altitude

CYCLIC PEAKS VS CYCLIC STEADY BY ALTITUDE LESS											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30					1	2					3
-20				3	9	6	1				19
-10		2	2	4	11	12					31
10		3	2	13	7	5					30
20					2						2
30											
40											
TOTAL		5	4	20	30	25	1				85
TIME	0.7	22.8	183.3	335.5	338.2	212.9	40.8	1.4	0.	0.	1135.6
CYCLIC PEAKS VS CYCLIC STEADY BY ALTITUDE 1000											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30					5		3				8
-20		2	2	3	29	6	3				45
-10	1		8	14	26	20	2				71
10	1	1	5	7	10	21	3				48
20		1									1
30											
40											
TOTAL	2	4	15	24	70	47	11				173
TIME	22.9	93.6	312.0	470.9	344.1	286.9	62.7	0.	0.	0.	1593.0
CYCLIC PEAKS VS CYCLIC STEADY BY ALTITUDE 2000											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40						1					1
-30											
-20		1	1	1	7	13	1				24
-10			3	16	14	15					48
10	2		6	7	7	5					27
20			1			1					2
30											
40				1							1
TOTAL	2	1	11	25	28	35	1				103
TIME	156.7	170.7	514.4	660.8	424.7	350.4	16.7	0.	0.	0.	2294.3

TABLE X
Cyclic Stick Peaks Versus Cyclic Stick
Steady by Airspeed

CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY LESS											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30					6	3	3				12
-20		1	1	5	42	19	5				73
-10	1		5	10	42	37	2				97
10	1	4	8	18	19	27	3				80
20		1	1		2	1					5
30											
40											
TOTAL	2	6	15	33	111	87	13				267
TIME	2.6	10.9	58.5	157.2	466.8	527.6	101.0	1.4	C.	0.	1326.1
CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 40											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20					1	3					4
-10				8	1	3					12
10				4		1					5
20											
30											
40											
TOTAL				12	2	7					21
TIME	0.4	5.0	11.4	47.7	44.3	23.0	1.8	0.	C.	0.	133.5
CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 60											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20				1		2					3
-10				3							3
10			1	1	1						3
20											
30											
40											
TOTAL			1	5	1	2					9
TIME	0.3	4.2	12.0	58.0	26.7	19.5	1.3	0.	C.	0.	127.0
CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 65											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20											
-10											
10					1	1					2
20											
30											
40											
TOTAL					1	1					2
TIME	0.2	8.7	8.2	64.7	30.5	38.8	2.4	0.	C.	0.	153.4

TABLE X, contd.

CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 70											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30											
-20		1									1
-10				5	3						8
10				2							2
20											
30											
40											
TOTAL		1		7	3						11
TIME	2.2	13.1	29.2	74.8	53.7	31.8	2.0	0.	C.	0.	206.8
CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 75											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30											
-20											
-10				2	1	1					4
10					1						1
20											
30											
40											
TOTAL				2	2	1					5
TIME	5.7	18.8	40.1	123.1	69.7	37.3	1.9	0.	C.	0.	296.7
CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 80											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30											
-20											
-10			1		1	1					3
10			1	1		1					3
20											
30											
40											
TOTAL			2	1	1	2					6
TIME	12.6	22.1	61.8	156.2	72.3	45.1	2.4	0.	C.	0.	372.5
CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 85											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30											
-20											
-10			1		1	1					3
10	1				1						2
20											
30											
40											
TOTAL	1		1		2	1					5
TIME	43.9	38.1	91.6	228.3	95.3	50.4	3.2	0.	C.	0.	550.8

TABLE X, contd.

CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 90											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20			1	1							2
-10				5	1	3					9
10			1		1						2
20											
30											
40											
TOTAL			2	6	2	3					13
TIME	66.5	37.6	110.7	154.0	76.8	39.5	2.6	0.	C.	0.	487.7
CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 95											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20		1			1						2
-10					1	1					2
10											
20											
30											
40											
TOTAL		1			2	1					4
TIME	35.8	24.2	144.9	132.4	63.0	24.0	1.0	0.	C.	0.	425.3
CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 100											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20					1						1
-10			3								3
10	1		2								3
20											
30											
40											
TOTAL	1		5		1						7
TIME	4.9	39.6	184.3	123.0	53.5	7.1	0.2	0.	C.	0.	412.7
CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 105											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20											
-10			1	1							2
10											
20											
30											
40											
TOTAL			1	1							2
TIME	1.6	49.1	190.5	161.1	28.2	3.0	0.2	0.	C.	0.	433.7

TABLE X, contd.

CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 110											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20			1								1
-10		2	2								4
10				1		1					2
20											
30											
40											
TOTAL		2	3	1		1					7
TIME	1.1	14.4	86.5	98.0	15.7	1.3	0.2	0.	C.	0.	217.1
CYCLIC PEAKS VS CYCLIC STEADY BY VELOCITY 115											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20						1					1
-10											
10											
20											
30											
40				1							1
TOTAL				1		1					2
TIME	2.6	0.5	3.0	27.3	10.5	1.7	0.	0.	C.	0.	45.6

TABLE XI
Cyclic Stick Peaks Versus Cyclic Stick Steady
by Rotor RPM

CYCLIC PEAKS VS CYCLIC STEADY BY RPM LESS											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30											
-20											
-10					1						1
10			1		2						3
20											
30											
40											
TOTAL			1		3						4
TIME	0.3	0.1	0.3	0.2	10.0	0.2	0.	0.	0.	0.	11.1

CYCLIC PEAKS VS CYCLIC STEADY BY RPM 180											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30							2				2
-20			1	2	7						10
-10		2	2	8	15	5					32
10				12	3	4	2				21
20											
30											
40											
TOTAL		2	3	22	25	9	4				65
TIME	0.3	55.7	369.1	250.7	168.5	97.9	28.4	0.	C.	0.	970.5

CYCLIC PEAKS VS CYCLIC STEADY BY RPM 185											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30					4	2	1				7
-20			1	3	28	23	5				60
-10			8	24	24	31	2				89
10	1	2	7	8	14	15	1				48
20		1	1			1					3
30											
40				1							1
TOTAL	1	3	17	36	70	72	9				208
TIME	55.4	64.9	536.0	991.6	552.0	532.4	63.8	1.4	C.	0.	2797.6

CYCLIC PEAKS VS CYCLIC STEADY BY RPM 190											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30					2	1					3
-20		3	1	2	9	1					16
-10	1		3	2	11	11					28
10	2	2	5	7	5	12					33
20					2						2
30											
40											
TOTAL	3	5	9	11	29	25					82
TIME	124.2	165.7	135.7	356.3	360.1	213.7	28.1	0.	0.	0.	1383.7

TABLE XI, contd.											
	CYCLIC PEAKS VS		CYCLIC STEADY			BY		RPM		195	
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20					1	1					2
-10											
10											
20											
30											
40											
TOTAL					1	1					2
TIME	0.2	0.5	1.2	15.4	16.6	5.6	0.	0.	0.	0.	39.5

	CYCLIC PEAKS VS		CYCLIC STEADY			BY		RPM		TOTAL	
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30					6	3	3				12
-20		3	3	7	45	25	5				88
-10	1	2	13	34	51	47	2				150
10	3	4	13	27	24	31	3				105
20		1	1		2	1					5
30											
40				1							1
TOTAL	4	10	30	69	128	107	13				361
TIME	180.3	287.2	1043.7	1614.7	1108.8	850.1	120.2	1.4	0.	0.	5206.4

TABLE XII Cyclic Stick Peaks Versus Airspeed Acceleration by Mission Segment												
CYCLIC PEAKS VS ACCELERATION BY MISSION SEGMENT ASCENT												
	LESS	-15.0	-12.0	-9.0	-6.0	-3.0	3.0	6.0	9.0	12.0	15.0	TOTAL
LESS				1		3	1					5
-40						10	4					14
-30					1	65	7					73
-20					1	109	14					124
-10					2	44	2					48
10				1		17						18
20						5						5
30												
40												
TOTAL				2	4	253	28					287
CYCLIC PEAKS VS ACCELERATION BY MISSION SEGMENT MANUVR												
	LESS	-15.0	-12.0	-9.0	-6.0	-3.0	3.0	6.0	9.0	12.0	15.0	TOTAL
LESS						1	1					2
-40						18	3	1				23
-30				1	2	30	1		1			34
-20				1	3	13						17
-10					2	10	1					13
10						1						1
20												
30												
40												
TOTAL				2	7	73	6	1	1			90

TABLE XII, contd.

CYCLIC PEAKS VS ACCELERATION BY MISSION SEGMENT DESCNT											
LESS	-15.0	-12.0	-9.0	-6.0	-3.0	3.0	6.0	9.0	12.0	15.0	TOTAL
LESS					2						2
-40					4						4
-30					60	2	1				63
-20					142	4					146
-10				1	95						96
10			2	2	76						80
20					10						10
30											
40											
TOTAL			2	3	389	6	1				401

TABLE XIII
Cyclic Stick Peaks Versus Airspeed
by Mission Segment

CYCLIC PEAKS VS VELOCITY BY MISSION SEGMENT ASCENT															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
LESS															
-40	1	3	1	3	1	2	1		1			1			14
-30	13	14	4	7	10	7	6	4	4		1				73
-20	36	29	12	10	9	11	9	4	2						124
-10	37		1	3		3	2	1				1			48
10	16					1		1							18
20	5														5
30															
40															
TOTAL	100	46	19	23	20	21	20	13	7	5	3	1	1		267

CYCLIC PEAKS VS VELOCITY BY MISSION SEGMENT MANUVR															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
LESS															
-40						1						1			2
-30	6	5	1	1	2	2		1			1	3	1		23
-20	12	6	1	4	4	1	2	1	1	1					34
-10	4	4	1	1	2	1	2	1		2					17
10	7	1	1	1	1	2									13
20	1														1
30															
40															
TOTAL	30	16	3	7	7	8	3	3	3	1	3	1	4	1	90

CYCLIC PEAKS VS VELOCITY BY MISSION SEGMENT DESCNT															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
LESS															
-40			1			1	1		1						4
-30	8	12	2	3	9	5	4	3	2	2	3	1	1		63
-20	31	25	4	11	12	11	17	8	9	7	6	1			146
-10	64	12	7	5	5	1	2	2	1	1	1	1			96
10	57	3	4	2	5	1	1	3	1	1	1				80
20	9	1													10
30															
40															
TOTAL	169	53	18	16	31	19	24	20	14	11	11	11	3	1	401

TABLE XIV
Cyclic Stick Peaks Versus Rotor
RPM by Mission Segment

CYCLIC PEAKS		VS	RPM		BY	MISSION SEGMENT ASCENT		
	LESS	180	185	190	195	200	205	TOTAL
LESS		2	3					5
-40	1	5	6	2				14
-30		21	44	8				73
-20	1	33	78	12				124
-10	2	13	27	6				48
10		8	7	3				18
20		2	3					5
30								
40								
TOTAL	4	84	168	31				287

CYCLIC PEAKS		VS	RPM		BY	MISSION SEGMENT MANUVR		
	LESS	180	185	190	195	200	205	TOTAL
LESS			2					2
-40			9	4	3			23
-30		7	9	4	3			23
-20	1	8	12	11	2			34
-10	1	1	9	6				17
10		2	6	5				13
20			1					1
30								
40								
TOTAL	2	18	39	26	5			90

CYCLIC PEAKS		VS	RPM		BY	MISSION SEGMENT DESCNT		
	LESS	180	185	190	195	200	205	TOTAL
LESS			2					2
-40		1	2	1				4
-30		17	35	11				63
-20	1	31	85	27	2			146
-10	1	17	49	28		1		96
10	1	20	37	20			2	80
20		2	6	1		1		10
30								
40								
TOTAL	3	88	216	88	2	2	2	401

TABLE XV
Collective Stick Peaks Versus Collective Stick
Steady by Cyclic Stick Steady

COLLECTIVE PEAKS VS COLL. STEADY BY CYCLIC STEADY LESS											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30											
-20					1	1					2
-10					1	1					2
10						3					3
20											
30											
40											
TOTAL					2	5					7
TIME	0.	0.	0.	0.7	91.3	84.7	3.6	0.	C.	0.	180.3

COLLECTIVE PEAKS VS COLL. STEADY BY CYCLIC STEADY 10											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30					1						1
-20				1	3	3					7
-10				1	6	5					12
10					1	1					2
20											
30											
40											
TOTAL				2	11	9					22
TIME	0.	0.	0.2	7.2	84.0	181.6	14.2	0.	C.	0.	287.2

COLLECTIVE PEAKS VS COLL. STEADY BY CYCLIC STEADY 20											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40				1							1
-30				1	2						3
-20				2	8						10
-10			1	3	3	4	1				12
10				3	3						6
20				1							1
30											
40											
TOTAL			1	11	16	4	1				33
TIME	0.	0.	2.9	43.2	147.7	773.8	76.1	0.	0.	0.	1043.7

TABLE XV, contd.

COLLECTIVE PEAKS VS COLL. STEADY BY CYCLIC STEADY 30											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30				1	2						3
-20				5	18	3	1				27
-10			1	8	34	12	1				56
10				5	10						15
20					1						1
30											
40											
TOTAL			1	19	65	15	2				102
TIME	0.	0.	5.6	107.3	854.9	601.0	45.8	0.1	C.	0.	1614.7
COLLECTIVE PEAKS VS COLL. STEADY BY CYCLIC STEADY 40											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40						1					1
-30				1	5						6
-20			1	2	17	9					29
-10			4	22	23	19	1				69
10				6	9	6					21
20					1	1					2
30											
40											
TOTAL			5	31	55	36	1				128
TIME	0.	0.	30.9	206.7	568.1	276.1	26.9	0.	C.	0.	1108.8
COLLECTIVE PEAKS VS COLL. STEADY BY CYCLIC STEADY 50											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40					2						2
-30					2		1				3
-20			1	3	11	2					17
-10			1	21	8	3	1				34
10			1	4	4	3					12
20				1	2						3
30											
40											
TOTAL			3	29	29	8	2				71
TIME	0.	0.	13.2	238.7	428.3	122.3	47.6	0.	C.	0.	850.1
COLLECTIVE PEAKS VS COLL. STEADY BY CYCLIC STEADY 60											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40											
-30											
-20					3						3
-10				5	4						9
10			1		1	1					3
20											
30											
40											
TOTAL			1	5	8	1					15
TIME	0.	0.	1.4	23.5	80.4	10.8	4.2	0.	C.	0.	120.2

TABLE XVI
Collective Stick Peaks Versus Collective Stick
Steady by Density Altitude

COLLECTIVE PEAKS VS COLL. STEADY BY ALTITUDE LESS											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40				1	2						3
-30				1	6						7
-20			2	3	24	5					34
-10			6	24	21	13	1				65
10			2	3	7	3					15
20					1	1					2
30											
40											
TOTAL			10	32	61	22	1				126
TIME	0.	0.	35.0	186.9	606.4	287.0	20.3	0.	C.	0.	1135.6

COLLECTIVE PEAKS VS COLL. STEADY BY ALTITUDE 1000											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40						1					1
-30				1	3						4
-20				7	18	3	1				29
-10				23	28	11	2				64
10				9	14	4					27
20				1	3						4
30											
40											
TOTAL				41	66	19	3				129
TIME	0.	0.	9.4	272.0	672.3	577.4	61.7	0.1	0.	0.	1593.0

COLLECTIVE PEAKS VS COLL. STEADY BY ALTITUDE 2000											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30				1	3		1				5
-20				3	19	10					32
-10			1	13	30	20	1				65
10				6	7	7					20
20				1							1
30											
40											
TOTAL			1	24	59	37	2				123
TIME	0.	0.	9.7	168.2	893.3	1087.5	135.7	0.	C.	0.	2294.3

TABLE XVII
Collective Stick Peaks Versus Collective
Stick Steady by Airspeed

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY LESS											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40				1	2						3
-30					5		1				6
-20			1	2	17	6					26
-10				17	26	25	2				70
10			2	11	15	9					37
20				2	4	1					7
30											
40											
TOTAL			3	33	69	41	3				149
TIME	0.	0.	4.2	110.9	804.2	322.0	84.7	0.1	C.	0.	1326.1

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 40											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40					2						2
-30					13						16
-20				3	6						14
-10			1	7	4						4
10											
20											
30											
40											
TOTAL			1	10	25						36
TIME	0.	0.	7.1	40.7	61.7	20.4	3.6	0.	0.	0.	133.5

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 60											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
-40					1						1
-30					2						3
-20				1	6						8
-10			1	1	1						1
10											
20											
30											
40											
TOTAL			1	3	9						13
TIME	0.	0.	2.8	33.4	58.4	24.6	2.8	0.	C.	0.	122.0

TABLE XVII, contd.

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 65										
LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS										
-40										
-30			2	1						3
-20		1	3	9	1					14
-10		1	7	5						13
10										
20										
30										
40										
TOTAL		2	12	15	1					30
TIME	0.	0.	3.5	66.7	56.1	26.4	0.7	0.	0.	153.4

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 70										
LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS										
-40										
-30			1	2						3
-20			1	4	1					6
-10			6	5	1					12
10				1						1
20										
30										
40										
TOTAL			8	12	2					22
TIME	0.	0.	7.8	66.8	83.7	44.3	4.1	0.	0.	206.8

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 75										
LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS										
-40					1					1
-30										
-20			3	2	2	1				8
-10		1	8	3						12
10			3	1						4
20										
30										
40										
TOTAL		1	14	6	3	1				25
TIME	0.	0.	5.9	72.3	134.4	75.0	9.0	0.	0.	296.7

TABLE XVII, contd.

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 80											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20					5	2					7
-10				4	8	3					15
10				2	1	1					4
20											
30											
40											
TOTAL				6	14	6					26
TIME	0.	0.	6.9	69.3	173.9	104.1	18.3	0.	0.	0.	372.5

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 85											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20					2	1					3
-10			2	5	7		1				15
10											
20											
30											
40											
TOTAL			2	5	9	1	1				18
TIME	0.	0.	6.4	67.2	297.9	163.2	16.0	0.	0.	0.	550.8

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 90											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30					1						1
-20					5						5
-10			1	2	3						6
10						1					1
20											
30											
40											
TOTAL			1	2	9	1					13
TIME	0.	0.	5.3	44.7	205.3	216.7	15.6	0.	0.	0.	487.7

TABLE XVII, contd.

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 95											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20					2	1					3
-10				2	5	1					8
10					1						1
20											
30											
40											
TOTAL				2	8	2					12
TIME	0.	0.	3.8	31.6	153.4	224.8	11.7	0.	0.	0.	425.3

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 100											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20						1					1
-10				1	4	3					8
10				1	2						3
20											
30											
40											
TOTAL				2	6	4					12
TIME	0.	0.	0.	20.0	117.1	270.4	5.2	0.	0.	0.	412.7

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 105											
	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20						1					1
-10						4					4
10					2	1					3
20											
30											
40											
TOTAL					2	6					8
TIME	0.	0.	0.1	3.8	79.8	340.0	10.0	0.	0.	0.	433.7

TABLE XVII, contd.

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 110										
LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS										
-40										
-30										
-20					1					1
-10				1	6					7
10				1	2					3
20										
30										
40										
TOTAL				2	9					11
TIME	0.	0.	0.1	0.	24.9	176.5	15.7	0.	0.	217.1

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 115										
LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS										
-40										
-30										
-20					1					1
-10					1					1
10										
20										
30										
40										
TOTAL					2					2
TIME	0.	0.	0.	0.	5.3	31.7	8.5	0.	0.	45.6

COLLECTIVE PEAKS VS COLL. STEADY BY VELOCITY 120										
LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS										
-40										
-30										
-20										
-10						1				1
10										
20										
30										
40										
TOTAL						1				1
TIME	0.	0.	0.	0.	0.	10.2	12.5	0.	0.	22.8

TABLE XVIII
Collective Stick Peaks Versus Collective Stick
Steady by Rotor RPM

COLLECTIVE PEAKS VS COLL. STEADY BY RPM LESS											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20											
-10						1					1
10				1		1					2
20											
30											
40											
TOTAL				1		2					3
TIME	0.	0.	0.	0.1	5.5	4.8	0.7	0.	0.	0.	11.1

COLLECTIVE PEAKS VS COLL. STEADY BY RPM 180											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20					9	2					11
-10				4	12	8	1				25
10				4	9	5					18
20											
30											
40											
TOTAL				8	30	15	1				54
TIME	0.	0.	0.	33.9	356.1	511.3	69.0	0.1	0.	0.	970.5

COLLECTIVE PEAKS VS COLL. STEADY BY RPM 185											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40				1	2						3
-30				1	5		1				7
-20			1	9	31	8					49
-10			2	30	44	32	2				110
10			2	8	10	7					27
20				2	2	1					5
30											
40											
TOTAL			5	51	94	48	3				201
TIME	0.	0.	26.6	347.3	1130.3	1192.1	101.3	0.	0.	0.	2797.6

COLLECTIVE PEAKS VS COLL. STEADY BY RPM 190											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40						1					1
-30				2	7						9
-20			1	4	19	8	1				33
-10			5	25	21	3	1				55
10				5	7	1					13
20					2						2
30											
40											
TOTAL			6	36	56	13	2				113
TIME	0.	0.	25.4	237.9	737.4	335.6	47.5	0.	0.	0.	1363.7

TABLE XVIII, contd.

COLLECTIVE PEAKS VS COLL. STEADY BY RPM 195											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20					1						1
-10					1						1
10					2						2
20											
30											
40											
TOTAL					4						4
TIME	0.	0.	2.2	5.4	25.7	6.2	0.	0.	0.	0.	39.5

COLLECTIVE PEAKS VS COLL. STEADY BY RPM 200											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40											
-30											
-20					1						1
-10				1	1						2
10											
20											
30											
40											
TOTAL				1	2						3
TIME	0.	0.	0.	2.7	1.1	0.3	0.	0.	0.	0.	4.1

COLLECTIVE PEAKS VS COLL. STEADY BY RPM TOTAL											
LESS	LESS	10	20	30	40	50	60	70	80	90	TOTAL
LESS											
-40				1	2	1					4
-30				3	12		1				16
-20			2	13	61	18	1				95
-10			7	60	79	44	4				194
10			2	18	28	14					62
20				2	4	1					7
30											
40											
TOTAL			11	97	186	78	6				378
TIME	0.	0.	54.1	627.4	2256.1	2050.3	218.4	0.1	0.	0.	5206.4

TABLE XIX
Collective Stick Peaks Versus Airspeed
Acceleration by Mission Segment

COLLECTIVE PEAKS VS ACCELERATION BY MISS. SEG. ASCENT												
LESS	LESS	-15.0	-12.0	-9.0	-6.0	-3.0	3.0	6.0	9.0	12.0	15.0	TOTAL
-40						4						4
-30					1	5						6
-20					1	27						28
-10					2	36						38
10				1	1	112	11	1	1			127
20						52	7	1				60
30						10	2		1			13
40												
TOTAL				1	5	246	20	2	2			276

COLLECTIVE PEAKS VS ACCELERATION BY MISS. SEG. MANUVR												
	LESS	-15.0	-12.0	-9.0	-6.0	-3.0	3.0	6.0	9.0	12.0	15.0	TOTAL
LESS						6						6
-40				1	2	4						7
-30					7	20						27
-20				1	2	34						37
-10						10						10
10						22	1					23
20						4						4
30						2						2
40												
TOTAL				2	11	102	1					116

COLLECTIVE PEAKS VS ACCELERATION BY MISS. SEG. DESCNT												
	LESS	-15.0	-12.0	-9.0	-6.0	-3.0	3.0	6.0	9.0	12.0	15.0	TOTAL
LESS					1	22						23
-40					7	31						38
-30				2	20	119						141
-20					15	185						200
-10						76	1	1				78
10						122	1					123
20						36						36
30						5						5
40												
TOTAL				2	43	596	2	1				644

TABLE XX
Collective Stick Peaks Versus Airspeed
by Mission Segment

COLLECTIVE PEAKS VS VELOCITY BY MISSION SEGMENT ASCENT																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
LESS																
-40	1	1		1	1											4
-30	1	1			1	1	1			1						6
-20	3	1	2	1	5	5	5	5			1					28
-10	20	2	1	2	5	3	1	1	2	1						38
10	63	26	3	10	5	3	9	1	2	2			1	2		127
20	38	12	3		1	4	1	1								60
30	9	3	1													13
40																
TOTAL	135	46	10	14	18	16	17	8	4	4	1		1	2		276

COLLECTIVE PEAKS VS VELOCITY BY MISSION SEGMENT MANUVR																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
LESS																
-40		3		1	2											6
-30	2	7	5	4	1	5	2	1			1					27
-20	4	7	5	3	1	4	4	4	3		1	1				37
-10	1		2		1	1	2	1	1							10
10	11	2	1	2	2	1		1	1				2			23
20	2	1	1													4
30	2															2
40																
TOTAL	24	22	15	11	8	11	8	7	5		2	1	2			116

COLLECTIVE PEAKS VS VELOCITY BY MISSION SEGMENT DESCENT																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
LESS																
-40	2	6	5	10	5	6	1	3								38
-30	6	57	28	12	19	10	3	3	3							141
-20	19	58	30	28	24	13	9	5	11	3						200
-10	29	15	8	1	5	4	4	4	1	4	1		1	1		78
10	88	3	6	2	5	2	4	4	1	1	1	3	3			123
20	34		2													36
30	5															5
40																
TOTAL	184	142	81	56	62	38	27	20	16	8	2	3	4	1		644

TABLE XXI
Collective Stick Peaks Versus Rotor
RPM by Mission Segment

COLLECTIVE PEAKS VS RPM BY MISSION SEGMENT ASCENT								
	LESS	180	185	190	195	200	205	TOTAL
LESS								
-40			2	1			1	4
-30		1		5				6
-20			23	5				28
-10		16	14	7		1		38
10	5	42	64	16				127
20	3	27	25	5				60
30	1	4	7	1				13
40								
TOTAL	9	50	135	40		1	1	276

COLLECTIVE PEAKS VS RPM BY MISSION SEGMENT MANUVR								
	LESS	180	185	190	195	200	205	TOTAL
LESS	1	1	4					6
-40		1	3	3				7
-30		1	14	11	1			27
-20		1	10	26				37
-10		4	3	3				10
10	3	5	11	4				23
20		2	2					4
30	1	1						2
40								
TOTAL	5	16	47	47	1			116

COLLECTIVE PEAKS VS RPM BY MISSION SEGMENT DESCNT								
	LESS	180	185	190	195	200	205	TOTAL
LESS	4	10	1	6	2			23
-40	2	5	19	9	2	1		38
-30		22	77	38	3	1		141
-20		15	111	70	2	2		200
-10	1	18	41	18				78
10	2	33	61	23	1	1	2	123
20	1	12	17	6				36
30		1	4					5
40								
TOTAL	10	116	331	170	10	5	2	644

TABLE XXII
Gust n_z Versus Airspeed by Mission
Segment by Altitude by Gross Weight

NZ GUST PEAKS VS VEL. BY MISS. SEG. ASCENT, ALT. LESS, WGT. LESS																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8								1								1
0.7								1								1
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL								2								2

NZ GUST PEAKS VS VEL. BY MISS. SEG. ASCENT, ALT. LESS, WGT. 30000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8								1								1
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL								1								1

NZ GUST PEAKS VS VEL. BY MISS. SEG. ASCENT, ALT. 10000, WGT. LESS																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2			1		2		1	1	1							6
0.8																
0.7					1			1								2
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL			1		3		1	2	1							8

NZ GUST PEAKS VS VEL. BY MISS. SEG. ASCENT, ALT. 10000, WGT. 20000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2						1										1
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL						1										1

TABLE XXII, contd.

WZ GUST PEAKS VS VEL. BY MISS. SEG. ASCENT, ALT. 1000, WGT. 30000

	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2						1										1
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL						1										1

WZ GUST PEAKS VS VEL. BY MISS. SEG. ASCENT, ALT. 1000, WGT. 34000

	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8																
0.7		1														1
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		1														1

WZ GUST PEAKS VS VEL. BY MISS. SEG. ASCENT, ALT. 1000, WGT. 42000

	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2				2		1	1									4
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL				2		1	1									4

WZ GUST PEAKS VS VEL. BY MISS. SEG. ASCENT, ALT. 2000, WGT. LESS

	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2					1		3									4
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL					1		3									4

TABLE XXII, contd.

NZ GUST PEAKS VS VEL. HY MISS. SEG. ASCENT, ALT. 2000, WGT. 26000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2					3											3
0.8										1						1
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL					3					1						4

NZ GUST PEAKS VS VEL. HY MISS. SEG. ASCENT, ALT. 2000, WGT. 30000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2										2	1					3
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL										2	1					3

NZ GUST PEAKS VS VEL. HY MISS. SEG. ASCENT, ALT. 2000, WGT. 34000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2									1							1
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL									1							1

TABLE XXII, contd.

NZ GUST PEAKS VS VEL. HY MISS. SEG. MANUVR. ALT. LESS. WGT. LESS																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2								1	1							2
0.8																
0.7								1				1				2
0.6																
0.5																
0.4																
0.3																
0.2																
LESS																
TOTAL								2	1			1				4

NZ GUST PEAKS VS VEL. HY MISS. SEG. MANUVR. ALT. LESS. WGT. 30000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8																
0.7								1								1
0.6																
0.5																
0.4																
0.3																
0.2																
LESS																
TOTAL								1								1

NZ GUST PEAKS VS VEL. HY MISS. SEG. MANUVR. ALT. 1000. WGT. 30000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8																
0.7																
0.6																
0.5																
0.4																
0.3																
0.2																
LESS																
TOTAL								1								1

TABLE XXII, contd.

NZ GUST PEAKS VS VEL. BY MISS. SFG. MANUVR, ALT. 2000, WGT. 26000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2			1	2												3
0.8																
0.7		1														1
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		1	1	2												4

NZ GUST PEAKS VS VEL. BY MISS. SFG. DESCNT, ALT. LESS, WGT. LESS																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2								1			1					2
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS								1			1					2
TOTAL								1			1					2

NZ GUST PEAKS VS VEL. BY MISS. SFG. DESCNT, ALT. LESS, WGT. 26000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2							1		1							2
0.8																
0.7									1							1
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL							1		2							3

TABLE XXII, contd.

WZ GUST PEAKS VS VEL. BY MISS. SEG. DESCNT, ALT. 1000, WGT. LESS																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8							1									1
0.7							1									1
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL							2									2

WZ GUST PEAKS VS VEL. BY MISS. SEG. DESCNT, ALT. 1000, WGT. 26000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2										1		2				3
0.8																
0.7							1					1				2
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL							1			1		3				5

WZ GUST PEAKS VS VEL. BY MISS. SEG. DESCNT, ALT. 1000, WGT. 30000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2								1	1			1				3
0.8																
0.7					1				1							2
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL						1		1	2			1				5

TABLE XXII, contd.

NZ GUST PEAKS VS VEL. HY MISS. SEG. DESCNT, ALT. 2000, WGT. LFSS															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2							2		1						3
0.8							1					1			2
0.7														1	1
0.6															
0.5															
0.4															
0.2															
LFSS							1		1			1		1	6
TOTAL															

NZ GUST PEAKS VS VEL. HY MISS. SEG. DESCNT, ALT. 2000, WGT. 20000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2															
0.8								1							1
0.7						1									1
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL						1		1							2

NZ GUST PEAKS VS VEL. HY MISS. SEG. DESCNT, ALT. 2000, WGT. 30000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2						1		1		1					3
0.8															
0.7										1					1
0.6											1				1
0.5															
0.4															
0.2															
LFSS						1		1		1		1			5
TOTAL						1		1		1		1			5

TABLE XXII, contd.

NZ GUST PEAKS VS VEL. BY MISS. SEG. DESCNT, ALT. 2000, WGT. 30000

	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2		1														1
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		1														1

NZ GUST PEAKS VS VEL. BY MISS. SEG. DESCNT, ALT. 5000, WGT. 30000

	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2								1								1
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL								1								1

NZ GUST PEAKS VS VEL. BY MISS. SFG. STEADY, ALT. LESS, WGT. 30000

	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2													2			2
0.8																
0.7												1				1
0.6																
0.5																
0.4																
0.2																
LESS												1	2			3
TOTAL												1	2			3
TIME	37.4	5.1	2.2	6.4	6.2	12.4	9.4	9.3	6.8	5.4	6.7	31.5	21.0	0.8	0.	160.7

TABLE XXII, contd.

NZ GUST PEAKS VS VEL. BY MISS. SEG. STEADY, ALT. LESS, WGT. 42000

	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2				1	1							1				3
0.8																
0.7								1	1							2
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL				1	1			1	1			1				5
TIME	31.0	4.4	4.3	5.0	4.5	3.1	4.0	2.1	3.7	2.5	0.1	0.3	0.2	0.	0.	66.7

NZ GUST PEAKS VS VEL. BY MISS. SEG. STEADY, ALT. 1000, WGT. LESS

	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3						1			1	1	1					1
1.2			1	1	2	3	3	6	9	8	6	2				41
0.8																
0.7					3	1	1	3	6	12	9	4				39
0.6									1	1						2
0.5																
0.4																
0.2																
LESS																
TOTAL			1	1	5	5	4	9	17	22	17	6				87
TIME	119.0	4.0	8.4	6.3	16.0	18.0	22.5	20.0	17.6	17.7	13.7	7.9	1.4	0.4	0.	274.5

NZ GUST PEAKS VS VEL. BY MISS. SEG. STEADY, ALT. 1000, WGT. 26000

	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3					1	1	1					1				4
1.2				1	1	8	8	10	8	10	10	5	4	1		64
0.8																
0.7		1			1	4	6	7	10	5	7	5	4	1		51
0.6				1					1		1	2				5
0.5										1						1
0.4																
0.2																
LESS																
TOTAL		1		2	3	13	13	17	19	16	18	13	8	2		129
TIME	177.3	19.0	12.7	22.0	24.9	35.7	49.1	51.2	40.3	36.9	25.8	24.1	11.2	3.6	0.3	534.2

TABLE XXII, contd.

N2 GUST PEAKS VS VEL. NY MISS. SEG. STEADY, ALT. LESS, WGT. LESS																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2		2	1	1	1			1	1		1				6	
0.8															3	
0.7																
0.6									1	1					2	
0.5									1						1	
0.4																
0.2																
LESS																
TOTAL		2	1	1	1	1		1	1	2	2				12	
TIME	95.0	5.3	5.0	9.1	8.1	6.0	3.6	9.0	8.9	9.6	6.6	7.7	1.9	0.2	0.	176.2

N2 GUST PEAKS VS VEL. NY MISS. SEG. STEADY, ALT. LESS, WGT. 26000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2				1		2	1		9	9	17	5	1		41	
0.8																
0.7					1		1	1	4	5	7	1	1		21	
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL				1	1	2	2	1	9	14	26	8	2		66	
TIME	221.0	25.0	16.2	20.5	24.6	20.8	15.8	26.0	26.5	34.6	28.7	11.2	4.6	2.9	1.5	479.9

N2 GUST PEAKS VS VEL. NY MISS. SEG. STEADY, ALT. LESS, WGT. 30000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2		1		1				2	2	1	5	2			12	
0.8																
0.7						1	1		3		1				6	
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		1		1		1	1	2	5	2	7	2			22	
TIME	67.5	3.5	4.8	8.1	12.9	14.7	16.6	16.0	13.0	7.9	6.3	27.0	24.8	0.5	0.	223.8

TABLE XXII, contd.

WZ GUST PEAKS VS VEL. BY MISS. SEC. STEADY, ALT. 1000, WGT. 30000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2				1		1	1	4	1		1	1	1			1
0.8																15
0.7								2	1	4	5	3				15
0.6								1			1	1				3
0.5												1				1
0.4																
0.2																
LESS																
TOTAL				1		1	1	7	2	4	7	7	1			33
TIME	40.8	13.6	8.7	9.5	4.9	8.7	9.7	19.0	7.1	8.8	39.2	60.1	55.1	9.5	0.	290.8

WZ GUST PEAKS VS VEL. BY MISS. SEC. STEADY, ALT. 1000, WGT. 34000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3								2	2							4
1.2					1		4	4			1	1				11
0.8																
0.7					1	2	3	1	1		1					7
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL					2	2	7	7	3		2	1				24
TIME	80.1	8.7	4.9	9.0	10.5	14.0	24.1	26.4	34.0	37.8	44.9	24.4	7.7	0.	0.	328.4

WZ GUST PEAKS VS VEL. BY MISS. SEC. STEADY, ALT. 1000, WGT. 38000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2										1						1
0.8																
0.7								1								1
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL								1		1						2
TIME	13.9	7.0	4.3	1.0	1.8	2.1	3.7	8.1	17.9	6.0	0.3	0.	0.	0.	0.	66.0

TABLE XXII, contd.

NZ GUST PEAKS VS VEL. BY MISS. SEG. STEADY, ALT. 1000, WGT. 42000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3						1										1
1.2			1	1	1	7	4		1							15
0.8																
0.7					1	1	2	2	2		1					9
0.6							1									1
0.5																
0.4																
0.2																
LESS																
TOTAL			1	1	2	9	7	2	3		1					26
TIME	22.3	1.1	3.2	4.9	10.2	13.5	11.9	7.3	9.1	6.5	7.7	1.3	0.	0.	0.	99.1

NZ GUST PEAKS VS VEL. BY MISS. SFG. STEADY, ALT. 2000, WGT. LESS																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2							4	3	11	1	3	1				5
0.8										10	7	10	2	4	8	59
0.7						1	5	3	8	10	10	10	6	6	10	69
0.6									1			1			3	5
0.5											1					1
0.4																
0.2																
LESS																
TOTAL						1	9	6	20	21	21	22	8	10	21	139
TIME	122.6	2.5	3.1	2.3	4.5	12.0	30.1	44.8	44.9	39.9	97.5	97.1	23.3	16.7	20.5	481.9

NZ GUST PEAKS VS VEL. BY MISS. SEG. STEADY, ALT. 2000, WGT. 26000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2		2		2	1	7	2	6	10	11	13	7	6			67
0.8																
0.7						2	3	7	10	5	8	10	6			51
0.6										3	1					4
0.5																
0.4																
0.2																
LESS																
TOTAL		2		2	1	9	5	16	21	21	22	17	12			126
TIME	184.9	12.6	13.4	16.5	29.8	55.0	58.7	85.5	82.2	63.7	90.5	56.5	29.0	4.9	0.1	743.3

TABLE XXII, contd.

NZ GUST PEAKS VS VEL. HY MISS. SEG. STEADY, ALT. 2000, WGT. 30000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3	1		1	1	7	3	10	13	16	9	3	1			7
1.2	1			1											64
0.8															
0.7	1				3	3	11	10	7	5	2	2	1		45
0.6									2						7
0.5															
0.4															
0.2															
LESS															
TOTAL	3		1	2	10	6	21	24	26	16	5	3	1		118
TIME	25.5	9.9	9.5	14.2	22.9	28.2	45.1	62.9	68.1	51.1	39.5	23.2	4.8	3.5	0.1 428.6

NZ GUST PEAKS VS VEL. HY MISS. SFG. STEADY, ALT. 2000, WGT. 34000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4									1						1
1.3										1	1				2
1.2	1				1	1	1	3	2	2					11
0.8															
0.7						3	1	9	1	2					16
0.6								1							1
0.5															
0.4															
0.2															
LESS															
TOTAL	1				1	4	2	13	4	5	1				31
TIME	54.3	9.6	18.2	16.2	12.1	17.3	24.7	46.7	72.5	71.8	57.3	49.4	9.0	0.	0. 459.0

NZ GUST PEAKS VS VEL. HY MISS. SEG. STEADY, ALT. 2000, WGT. 38000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2					1			2	3	2	1				9
0.8															
0.7							4								4
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL					1		4	2	3	2	1				13
TIME	13.9	1.2	2.0	3.1	7.9	11.9	10.2	17.6	14.4	8.9	10.5	1.9	0.	0.	0. 103.4

TABLE XXII, contd.

NZ GUST PEAKS VS VEL. BY MISS. SEG. STEADY, ALT. 2000, WGT. 40000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL																
TIME	14.4	0.9	0.8	1.9	1.4	10.8	11.4	20.9	8.9	6.4	0.2	0.	0.	0.	0.	78.1

NZ GUST PEAKS VS VEL. BY MISS. SEG. STEADY, ALT. 5000, WGT. 20000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL																
TIME	1.3	0.	0.	0.2	0.6	0.8	4.2	14.1	6.9	1.9	9.4	30.1	19.0	0.	0.	87.5

NZ GUST PEAKS VS VEL. BY MISS. SEG. STEADY, ALT. 5000, WGT. 30000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL																
TIME	0.	0.	0.	0.	0.	0.	0.	0.4	0.4	2.7	7.2	13.7	1.8	0.	0.	26.2

TABLE XXII, contd.

42 GUST PEAKS VS VEL. BY MISS. SEG. STEADY, ALT. 5000, WGT. 30000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2						1									1
0.8															
0.7															
0.6															
0.5															
0.4															
0.2															
LESS						1									1
TOTAL															
TIME	0.	0.	0.	0.1	0.1	0.3	1.4	0.6	0.5	0.	0.	0.	0.	0.	3.1

TABLE XXIII
Gust n_z Versus μ by Mission Segment
by Altitude by $\frac{C_T}{\sigma}$

NZ GUST PEAKS VS MU BY MISS. SEG. ASCENT, ALT. LESS, CT/S LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2					1			1	
0.8									
0.7					1			1	
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL					2			2	

NZ GUST PEAKS VS MU BY MISS. SEG. ASCENT, ALT. LESS, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2					1			1	
0.8									
0.7									
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL					1			1	

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. ASCENT, ALT. 1000, CT/S LESS									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2						3			3
0.8									
0.7						1			1
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL						4			4

NZ GUST PEAKS VS MU BY MISS. SEG. ASCENT, ALT. 1000, CT/S 0.06									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2				1	4				5
0.8									
0.7					1				1
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL				1	5				6

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. ASCENT, ALT. 1000, CT/S 0.09								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2				4				4
0.8								
0.7			1					1
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL			1	4				5

NZ GUST PEAKS VS MU BY MISS. SEG. ASCENT, ALT. 2000, CT/S 0.06								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2				5	5			10
0.8								
0.7					1			1
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL				5	6			11

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. ASCENT, ALT. 2000, CT/S 0.09								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2					1			1
0.8								
0.7								
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL					1			1

NZ GUST PEAKS VS MU BY MISS. SEG. MANUVR, ALT. LESS, CT/S 0.06								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2					2			2
0.8								
0.7				1	1	1		3
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL				1	3	1		5

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. MANUVR. ALT. 1000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2					1			1	
0.8									
0.7									
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL					1			1	

NZ GUST PEAKS VS MU BY MISS. SEG. MANUVR, ALT. 2000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2					3			3	
0.8									
0.7			1					1	
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL			1		3			4	

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. DESCNT, ALT. LESS, CT/S LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2						1			1
0.8									
0.7									
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL						1			1

NZ GUST PEAKS VS MU BY MISS. SEG. DESCNT, ALT. 1000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2						3	3		6
0.8									
0.7					2	2	1		5
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL					2	5	4		11

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. DESCNT, ALT. 2000, CT/S LESS									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2									
0.8									
0.7					1				1
0.6							1		1
0.5									
0.4									
0.2									
LESS									
TOTAL					1		1		2

NZ GUST PEAKS VS MU BY MISS. SEG. DESCNT, ALT. LESS, CT/S 0.06									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2					1	2			3
0.8									
0.7						1			1
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL					1	3			4

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. DESCNT, ALT. 1000, CT/S LESS								
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	C.30 TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2						1		1
0.8								
0.7								
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL						1		1

NZ GUST PEAKS S MU BY MISS. SEG. DESCNT, ALT. 5000, CT/S 0.09								
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	C.30 TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2								
0.8						1		1
0.7								
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL						1		1

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. DESCNT, ALT. 2000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2					2	5		7	
0.8					1	1	1	3	
0.7							1	1	
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL					3	6	2	11	

NZ GUST PEAKS VS MU BY MISS. SEG. DESCNT, ALT. 2000, CT/S 0.09									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2				1				1	
0.8									
0.7									
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL				1				1	

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY, ALT. LESS, CT/S LESS									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2						1			1
0.8									
0.7						2			2
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL						3			3
TIME	3.4	67.9	14.6	3.9	12.7	24.7	10.0	0.	137.3

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY, ALT. LESS, CT/S 0.00									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3				3	3	4	4		14
1.2				1	4	44	8		57
0.8									
0.7					3	21	4		28
0.6						1			1
0.5									
0.4									
0.2									
LESS									
TOTAL				4	10	70	16		100
TIME	5.5	279.7	47.1	47.0	172.0	192.3	101.3	0.8	845.8

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY, ALT. LESS, CT/S 0.09									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2				2		1		3	
0.8									
0.7					2			2	
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL				2	2	1		5	
TIME	0.5	36.8	2.9	7.5	45.8	27.1	32.0	0.	152.6

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY, ALT. 1000, CT/S LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4					1			1	
1.3				1	2			3	
1.2				10	28			38	
0.8									
0.7				5	28	3		36	
0.6					1			1	
0.5									
0.4									
0.2									
LESS									
TOTAL				16	60	3		79	
TIME	0.8	14.7	9.1	8.7	51.8	51.7	2.2	0.	138.9

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY, ALT. 1000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3					3	3	2		8
1.2					24	48	14		86
0.8									
0.7			1	14	45	15			75
0.6				1	4	4			9
0.5					1	1			2
0.4									
0.2									
LESS									
TOTAL			1	42	101	36			180
TIME	9.8	295.6	37.6	55.5	217.8	271.9	205.9	0.	1094.2

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY, ALT. 1000, CT/S 0.09									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3					1	2			3
1.2			1	13	7				21
0.8									
0.7				6	7				13
0.6				1					1
0.5									
0.4									
0.2									
LESS									
TOTAL			1	21	16				38
TIME	2.0	72.5	13.6	17.4	69.9	159.4	25.1	0.	359.8

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY, ALT. 2000, CT/S LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3					2	1		3	
1.2				3	19	5		27	
0.8									
0.7				3	23	4		30	
0.6					1	2		3	
0.5									
0.4									
0.2									
LESS									
TOTAL				6	45	12		63	
TIME	0.	9.0	1.5	1.4	9.0	46.1	8.5	1.4	76.9

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY, ALT. 2000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3			1	2	9			12	
1.2			3	23	97	38	2	163	
0.8									
0.7			1	13	69	45	4	132	
0.6					7	1		8	
0.5					1			1	
0.4									
0.2									
LESS									
TOTAL			5	38	183	84	6	316	
TIME	22.8	274.6	43.4	37.3	309.3	687.3	227.3	4.8	1606.9

TABLE XXIII, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY, ALT. 2000, CT/S 0.09									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4						1			1
1.3						2	1		3
1.2				1	6	17	1		25
0.8									
0.7					3	20			23
0.6						1			1
0.5									
0.4									
0.2									
LESS									
TOTAL				1	9	41	2		53
TIME	0.	51.0	14.9	19.9	125.0	309.1	90.6	0.	610.5

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY, ALT. 5000, CT/S 0.06									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2									
0.8									
0.7							2		2
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL							2		2
TIME	0.	0.3	0.	0.	13.5	87.8	78.7	0.	180.3

TABLE XXIII, contd.

NZ GUST PEAKS VS MU HY MISS. SEG. STEADY, ALF. 5000, CT/S 0.09									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2					1				1
0.8									
0.7									
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL					1				1
TIME	0.	0.	0.	0.	2.1	1.0	0.	0.	3.1

TABLE XXIV
Gust n_z Versus μ by Mission Segment

NZ GUST PEAKS VS μ BY MISS. SEG. ASCENT									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2				1	13	11			25
0.8									
0.7				1	1	3			5
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL				2	14	14			30

NZ GUST PEAKS VS μ BY MISS. SEG. MANUVR									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2					4	2			6
0.8									
0.7				1	1	1	1		4
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL				1	5	3	1		10

TABLE XXIV, contd.

NZ GUST PEAKS VS MU BY MISS. SEG. DESCNT

	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2				1	4	12	3		20
0.3									
0.7					4	4	2		10
0.6							2		2
0.5									
0.4									
0.2									
LESS									
TOTAL				1	8	16	7		32

NZ GUST PEAKS VS MU BY MISS. SEG. STEADY

	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4						2			2
1.3				4	10	24	8		46
1.2				6	86	261	67	2	422
0.8									
0.7				2	47	217	73	4	343
0.6					2	15	7		24
0.5						2	1		3
0.4									
0.2									
LESS									
TOTAL				12	145	521	155	6	840
TIME	44.9	1102.0	184.7	198.8	1029.0	1858.4	781.6	7.1	5206.4

TABLE XXV
Gust n_z Versus Airspeed by Mission Segment

NZ GUST PEAKS VS VEL. BY MISS. SEG. ASCENT															
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120 TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2			1	2	4	5	4	2	3	3	1				25
0.8															
0.7		1				1		1	1	1					5
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL		1	1	2	4	6	4	3	4	4	1				30

NZ GUST PEAKS VS VEL. BY MISS. SEG. MANUVR															
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120 TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2			1	2		1		1	1						6
0.8															
0.7		1				1		1				1			4
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL		1	1	2		2		2	1			1			10

NZ GUST PEAKS VS VEL. BY MISS. SEG. DESCENT															
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120 TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2		1				2	1	5	2	2	2	1	2		20
0.8															
0.7						2	2	1	2		1	1	2		10
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL		1				4	5	6	4	2	3	2	4		32

TABLE XXV, contd.

Nº DUST PEAKS VS VEL. BY MISS. SEG. STEADY															
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120 TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3		3	1	2	3	4	1	3	5	1	1				2
1.2		5	2	10	4	29	31	47	67	6	10	8			46
1.1										71	74	36	19	5	8
1.0															422
0.9		7			7	15	28	44	65	50	57	38	19	8	10
0.8				1			1	1	4	7	3	4			3
0.7										1	1	1			1
0.6															
0.5															
0.4															
0.3															
0.2															
0.1															
LESS															
TOTAL		10	3	13	18	58	61	95	141	136	146	87	38	13	21
TIME	1375.1	133.5	172.0	153.4	206.4	296.7	372.5	550.8	487.7	425.3	412.7	433.7	217.1	45.4	22.8
															5206.4

TABLE XXVI									
Gust n_z Versus μ									
NZ GUST PEAKS VS. MU COMPOSITE									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	C.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4						2			2
1.3				4	10	24	8		46
1.2				8	107	286	70	2	473
0.8									
0.7				4	53	225	76	4	362
0.6					2	15	9		26
0.5						2	1		3
0.4									
0.2									
LESS									
TOTAL				16	172	554	164	6	912

TABLE XXVII																
Gust n_z Versus Airspeed																
NZ GUST PEAKS VS VELOCITY COMPOSITE																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3		3	1	2	3	4	1	3	5	1	1					2
1.2		6	4	14	12	47	38	55	73	76	10	8				46
0.8																
0.7		4			7	19	30	47	68	51	98	39	21	5	8	473
0.6				1			1	1	4	7	3	5				26
0.5										1	1	1				3
0.4																
0.2																
LESS																
TOTAL		13	5	17	22	70	70	106	150	142	156	90	42	13	22	912

TABLE XXVIII
Maneuver n_z Versus Airspeed by Mission
Segment by Altitude by Gross Weight

N2 MANEUVERS VS VEL. BY MI S. SEG. ASCENT, ALT. LESS, WGT. LESS																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4	1															1
1.3	1															1
1.2	1															1
0.8																
0.7								1		1						2
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL	3							1		2						5

N2 MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. LESS, WGT. 26000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3	1							1								2
1.2	3															4
0.8																
0.7	2	1						1								4
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL	6	1						1		1	1					10

N2 MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. LESS, WGT. 30000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	1															1
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL	1															1

TABLE XXVIII, contd.

N7 MANEUVERS VS VEL. HY MISS. SFG. ASCENT. ALT. LESS. WGT. 38000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	1															1
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL	1															1

N2 MANEUVERS VS VEL. HY MISS. SFG. ASCENT. ALT. LESS. WGT. 42000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3	1															1
1.2	1				2											3
0.8																
0.7	2							1								3
0.6		1														1
0.5																
0.4																
0.2																
LESS																
TOTAL	4	1			2			1								8

N2 MANEUVERS VS VEL. HY MISS. SFG. ASCENT. ALT. 1000, WGT. LESS																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4	1															1
1.3																
1.2	5	1							1			1				8
0.8																
0.7	1					1			1	1		1				5
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL	7	1				1			2	1		2				14

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. 1000, WGT. 26000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3	1	1														2
1.2	2	1		1				1								5
0.8																
0.7	1						1			1	1					4
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL	4	2		1			1	1		1	1					11

NZ MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. 1000, WGT. 30000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	2	1														3
0.8																
0.7				1												1
0.6									1							1
0.5																
0.4																
0.2																
LESS																
TOTAL	2	1		1					1							5

NZ MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. 1000, WGT. 34000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8							1									1
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL							1									1

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. 1000, WGT. 42000															
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120 TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2		2	1			1				1					5
0.8															
0.7	1			1											2
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL	1	2	1	1		1				1					7

NZ MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. 2000, WGT. LESS															
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120 TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4	1														1
1.3	2														2
1.2	6	2				2	3	2							15
0.8															
0.7		2	2	1	2		1	4	3						15
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL	9	4	2	1	2	2	4	6	3						33

NZ MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. 2000, WGT. 26000															
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120 TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2	1		1										1		2
0.8															
0.7	1		1		1	1	1	3							8
0.6															
0.5													1		1
0.4															
0.2															
LESS															
TOTAL	2		2		1	1	1	3					2		12

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. 2000, WGT. 30000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5									1							1
1.4																
1.3																
1.2	1	1						1								3
0.8						2	1	2		2						7
0.7																2
0.6		1	1													
0.5																
0.4																
0.2																
LESS																
TOTAL	1	2	1			2	1	3	1	2						13

NZ MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. 2000, WGT. 30000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8																
0.7		1														1
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		1														1

NZ MANEUVERS VS VEL. BY MISS. SEG. ASCENT, ALT. 2000, WGT. 42000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2			1													1
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL			1													1

TABLE XXVIII, contd.

N7 MANEUVERS VS VEL. RV MISS. SEG. ASCENT, ALT. 5000, WGT. 26000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8																
0.7																
0.6								1								1
0.5																
0.4																
0.2																
LESS																
TOTAL								1								1

N2 MANEUVERS VS VEL. RV MISS. SEG. MANUVR, ALT. LESS, WGT. LESS																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2		1		1												2
0.8																
0.7								1								1
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		1		1				1								3

N2 MANEUVERS VS VEL. RV MISS. SEG. MANUVR, ALT. LESS, WGT. 26000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	1		1					1								3
0.8																
0.7								1								1
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL	1		1					2								5

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. MANUVR. ALT. LESS, WGT. 30000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3		1														1
1.2						1										1
0.8																
0.7		2				2		2			1					7
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		3				3		2			1					9

NZ MANEUVERS VS VEL. BY MISS. SEG. MANUVR. ALT. LESS, WGT. 42000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8																
0.7																
0.6										1						1
0.5																
0.4																
0.2																
LESS																
TOTAL										1						1

NZ MANEUVERS VS VEL. BY MISS. SEG. MANUVR. ALT. 1000, WGT. 26000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4		1														1
1.3		2								1						4
1.2		1		2		1		3								7
0.8																
0.7		1	1			1				1			1			5
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		5	1	2		2		3		1	1			1		17

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. HY MISS. SEG. MANUVR. ALT. 1000, WGT. 30000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3	1														1
1.2															
0.8															
0.7									1						1
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL	1								1						2

NZ MANEUVERS VS VEL. HY MISS. SEG. MANUVR. ALT. 1000, WGT. 30000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4	1														1
1.3	1														1
1.2															
0.8															
0.7															
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL	2														2

NZ MANEUVERS VS VEL. HY MISS. SEG. MANUVR. ALT. 2000, WGT. LESS															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2	1		1	3	1	1	4		1						12
0.8															
0.7												1			1
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL	1		1	3	1	1	4		1			1			13

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. MANUVR, ALT. 2000, WGT. 26000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4							1			1		2				2
1.3							1				1					3
1.2	1		1		2	1	1				1					7
1.1	2	4	1	2	3	4	1	5	2							24
1.0																
0.8																
0.7	1					1	2	2	1				1	2		10
0.6		1		1	2											4
0.5																
0.4																
0.3																
0.2																
LESS																
TOTAL	4	5	2	3	7	6	5	7	3	1	2	2	1	2		50

NZ MANEUVERS VS VEL. BY MISS. SEG. MANUVR, ALT. 2000, WGT. 30000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3	2															2
1.2		1		1		1					1					4
1.1																
1.0																
0.8																
0.7	2															2
0.6	2					1										3
0.5																
0.4																
0.3																
0.2																
LESS																
TOTAL	6	1		1		2					1					11

NZ MANEUVERS VS VEL. BY MISS. SEG. MANUVR, ALT. 5000, WGT. 30000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
1.1																
1.0																
0.8																
0.7	1															1
0.6		2														2
0.5																
0.4																
0.3																
0.2																
LESS																
TOTAL	1	2														3

TABLE XXVIII, contd.

HZ MANEUVERS VS VEL. BY MISS. SEG. DESCNT. ALT. LESS, WGT. LESS																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	1	2		1	2											
0.8																6
0.7	1	1										1				3
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL	2	3		1	2							1				9

HZ MANEUVERS VS VEL. BY MISS. SEG. DESCNT. ALT. LESS, WGT. 26000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2				1		1		1								3
0.8																
0.7					1		1									2
0.6							1									1
0.5																
0.4																
0.2																
LESS																
TOTAL				1	1	1	2	1								6

HZ MANEUVERS VS VEL. BY MISS. SEG. DESCNT. ALT. LESS, WGT. 30000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2				1		1		1								3
0.8																
0.7		1				1	1			1						4
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		1		1		2	1	1		1						7

TABLE XXVIII, contd.

N7 MANEUVERS VS VEL. HY MISS. SEG. DESCNT, ALT. 1000, WGT. LESS																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	4		1	1	1	2	2		1		1				13	
0.8																
0.7	1	1		1			6		2		2		1		14	
0.6					1				1		1				3	
0.5																
0.4																
0.2																
LESS																
TOTAL	5	1	1	2	2	2	8		4		4		1		30	

N2 MANEUVERS VS VEL. HY MISS. SEG. DESCNT, ALT. 1000, WGT. 26000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2		1		1	1	2	4	2		1					12	
0.8																
0.7	1				2	2		1			1		1		8	
0.6					1										1	
0.5																
0.4																
0.2																
LESS																
TOTAL	1	1		1	4	4	4	3		1	1		1		21	

N2 MANEUVERS VS VEL. HY MISS. SEG. DESCNT, ALT. 1000, WGT. 10000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3	1														1	
1.2	1	1	1		1	2			1	1					8	
0.8																
0.7	1		1			2			1						5	
0.6						1				1					2	
0.5																
0.4																
0.2																
LESS																
TOTAL	3	1	2		1	5			1	2	1				16	

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SFG. DESCNT. ALT. LFSS. WGT. 36000																
	LFSS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	1		1	2												4
0.8																
0.7	2					1										3
0.6																
0.5																
0.4																
0.2																
LFSS																
TOTAL	3		1	2		1										7

NZ MANEUVERS VS VEL. BY MISS. SFG. DESCNT. ALT. LFSS. WGT. 34000																
	LFSS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2		1	1													2
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LFSS																
TOTAL		1	1													2

NZ MANEUVERS VS VEL. BY MISS. SFG. DESCNT. ALT. LFSS. WGT. 34000																
	LFSS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	1				1		1									3
0.8																
0.7						1										1
0.6																
0.5																
0.4																
0.2																
LFSS																
TOTAL	1				1	1	1									4

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. DESCNT, ALT. LESS, WGT. 42000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2		1														1
0.8																
0.7		1	1													2
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL	2	1														3

NZ MANEUVERS VS VEL. BY MISS. SEG. DESCNT, ALT. 1000, WGT. 38000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2			1	1		1										3
0.8																
0.7						1										1
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL			1	1		2										4

NZ MANEUVERS VS VEL. BY MISS. SEG. DESCNT, ALT. 1000, WGT. 42000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3							1									1
1.2		3					2									5
0.8																
0.7							1	3								4
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		3					4	3								10

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SIG. DESCNT. ALT. 2000, WGT. LESS															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3		1													1
1.2		1		1	2	3	2	2	3			1	1	1	19
0.8				1											
0.7	1			2	1	2	4	1	2	3		1		1	18
0.6							3	1	1						5
0.5															
0.4															
0.2															
LESS															
TOTAL	1	2		3	3	5	6	6	7			2	1	2	43

NZ MANEUVERS VS VEL. BY MISS. SIG. DESCNT. ALT. 2000, WGT. 26000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3	1														1
1.2	3	1		1		1		1							11
0.8	2			1	1	1	2	3	1						11
0.7															2
0.6						2									
0.5															
0.4															
0.2															
LESS															
TOTAL	6	1		1	4	1	3	2	6	1					25

NZ MANEUVERS VS VEL. BY MISS. SIG. DESCNT. ALT. 2000, WGT. 30000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2				1	1		1	1							4
0.8															
0.7				1	3		1				1				6
0.6					1										1
0.5				1											1
0.4															
0.2															
LESS															
TOTAL				3	5		2	1			1				12

TABLE XXVIII, contd.

M7 MANEUVERS VS VEL. BY MISS. SFG. DESCNT. ALT. 2000. WGT. 34000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3		1		1											2
1.2					1	2									3
0.8															
0.7				2	1	2									5
0.6						1	1								2
0.5															
0.4															
0.2															
LESS															
TOTAL		1		3	2	5	1								12

M7 MANEUVERS VS VEL. BY MISS. SFG. DESCNT. ALT. 2000. WGT. 34000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2		1	1												2
0.8															
0.7															
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL		1	1												2

M7 MANEUVERS VS VEL. BY MISS. SFG. DESCNT. ALT. 2000. WGT. 42000															
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2					2	1									3
0.8															
0.7															
0.6															
0.5															
0.4															
0.2															
LESS															
TOTAL					2	1									3

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. LESS, WGT. 26000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3						1		1	2						4	
1.2	5	1	1	4		2	2	1	4	5	2				27	
0.8																
0.7	6				2	2	2	3	2	2					19	
0.6																
0.5										1					1	
0.4																
0.2																
LESS																
TOTAL	11	1	1	4	2	5	4	3	4	6	8	2			51	
TIME	221.0	25.0	16.2	20.5	24.6	20.8	15.8	26.0	28.5	34.6	28.7	11.2	4.6	2.9	1.5	479.9

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. LESS, WGT. 30000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	1			2			1	4	1				1		10	
0.8																
0.7	1			1	1			5	4	1	2				15	
0.6								1							1	
0.5																
0.4																
0.2																
LESS																
TOTAL	2			3	1		1	10	5	1	2		1		26	
TIME	67.5	3.5	4.8	8.1	12.2	14.7	16.6	16.0	13.0	7.9	6.3	27.0	24.8	0.5	0.	223.8

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. LESS, WGT. 34000																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL					1										1	
TIME	37.4	5.1	2.2	6.4	6.2	12.4	7.4	9.3	6.8	5.4	6.7	31.5	21.0	0.8	0.	160.7

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. LESS, WGT. 10000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2											1					1
0.8																
0.7																
0.6																
0.5																
0.4																
0.2																
LESS											1					1
TOTAL																
TIME	4.1	0.2	0.2	0.2	1.5	6.6	5.1	1.2	1.7	1.4	0.6	0.3	2.4	2.5	0.3	28.4

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. LESS, WGT. 42000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2			1		3			1								5
0.8																1
0.7					1	1										2
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL			1		4	1		1								7
TIME	31.0	4.4	4.3	5.8	4.5	3.1	4.0	2.1	3.7	2.5	0.1	0.3	0.2	0.	0.	66.7

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 1000, WGT. LESS																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3	1									1						2
1.2	4	1		3		3	1	2	2	3	2		1			22
0.8																
0.7	3				1	1	1		2	1	2	2				15
0.6										1				1		2
0.5																
0.4																
0.2																
LESS																
TOTAL	8	1		3	3	4	2	2	4	6	4	2	1	1		41
TIME	119.0	4.0	8.4	6.3	16.8	18.8	22.9	20.0	17.6	17.7	13.7	7.9	1.4	0.4	0.	274.5

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 1000, WGT. 26000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3								2								2
1.2								1	1	1						4
1.1								7	8	4	2	3	1	1		42
1.0																
0.9																
0.8																
0.7																
0.6																
0.5																
0.4																
0.3																
0.2																
LESS																
TOTAL	4	1		1	4	7	6	17	12	9	8	4	3	3		87
TIME	177.3	19.0	12.7	22.0	24.9	35.7	49.1	51.2	60.3	66.9	75.8	24.1	11.2	3.6	0.3	516.2

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 1000, WGT. 30000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
1.1																
1.0																
0.9																
0.8																
0.7																
0.6																
0.5																
0.4																
0.3																
0.2																
LESS																
TOTAL	3	5		1			1		2			3	1	1		17
TIME	40.8	13.4	8.7	5.5	4.9	8.7	9.7	19.0	7.3	8.8	34.2	60.1	55.1	9.5	0.	290.8

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 1000, WGT. 34000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2																
1.1																
1.0																
0.9																
0.8																
0.7																
0.6																
0.5																
0.4																
0.3																
0.2																
LESS																
TOTAL	7					1	4		1							13
TIME	80.1	8.7	4.9	9.0	10.5	14.0	24.1	26.4	34.0	19.8	44.9	24.4	7.7	0.	0.	128.4

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 1000, WGT. 38000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3									1							1
1.2									1							1
0.9																
0.7										1						1
0.6																
0.5																
0.4																
0.2																
LESS									2	1						3
TOTAL																
TIME	13.9	7.0	4.3	1.0	1.8	2.1	1.7	8.1	17.9	6.0	0.3	0.	0.	0.	0.	66.0

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 1000, WGT. 42000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2		1		1		2	4	1	2							11
0.8																
0.7						1	2	1		1						5
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL		1		1		3	6	2	2	1						16
TIME	22.3	1.1	1.2	4.9	10.2	13.5	11.9	7.3	9.1	6.5	7.7	1.3	0.	0.	0.	99.1

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 2000, WGT. 1355																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	1					1	4	4	4	5	2	1	1	2	2	5
0.8											5	12	1	5	2	44
0.7	1					2	2	1	4	5	3	4	1	4	3	30
0.6							1				1	1	1		1	5
0.5																
0.4																
0.2																
LESS																
TOTAL	2					3	7	5	8	10	11	18	3	11	6	84
TIME	122.6	2.5	3.1	2.3	4.5	12.0	30.1	44.8	44.9	19.9	57.5	57.1	23.1	16.7	20.5	481.9

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 2000, WGT. 26000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3	1															1
1.2	3	1	1	4	3	4	1	8	3	8	10	1	7	2	1	2
0.8																62
0.7	7	1		1	2	3	3	4	5	11	3	3	2			45
0.6										2	2	1				5
0.5																
0.4	1															1
0.2																
LESS																
TOTAL	12	2	1	5	5	7	11	12	8	21	15	12	4	1		116
TIME	104.9	12.6	13.4	16.5	29.8	55.0	58.7	85.5	82.2	63.7	50.5	56.5	29.0	4.9	0.1	743.3

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 2000, WGT. 30000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	1	1				2	2	6	4	4	3					1
0.8																23
0.7	1	2	1	1	2	3		3	1	6	3	1	2			26
0.6		1			1		1	1	1	1	1					7
0.5							1		1							2
0.4																
0.2																
LESS																
TOTAL	2	4	1	1	3	5	5	10	7	11	7	1	2			59
TIME	25.5	9.9	9.5	14.2	22.9	28.2	45.1	82.9	68.1	51.1	39.5	23.2	4.8	3.5	0.1	428.6

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 2000, WGT. 34000																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2						2	2	5	1	4	1					15
0.8																
0.7	1			1	2	1	2		1	4	2					14
0.6								1								1
0.5																
0.4																
0.2																
LESS																
TOTAL	1			1	2	3	4	6	2	8	3					30
TIME	54.3	9.6	10.2	16.2	12.1	17.3	24.7	46.7	72.5	71.8	57.3	49.4	9.0	0.	0.	459.0

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. 2000, WGT. 30000															
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120 TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2															
0.8											1				1
0.7	1			1		2									
0.6															4
0.5															
0.4															
0.2															
LESS															
TOTAL	1			1		2					1				5
TIME	13.9	1.2	2.0	3.1	7.9	11.9	10.2	17.6	14.4	8.9	10.5	1.9	0.	0.	0. 103.4

NZ MANEUVERS VS VEL. BY MISS. SEG. DESCNT, ALT. 5000, WGT. 34000															
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120 TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2															
0.8															
0.7															
0.6							1								1
0.5															
0.4															
0.2															
LESS															
TOTAL						1									1

NZ MANEUVERS VS VEL. BY MISS. SEG. DESCNT, ALT. 5000, WGT. 30000															
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120 TOTAL
2.4															
2.2															
2.0															
1.8															
1.7															
1.6															
1.5															
1.4															
1.3															
1.2															
0.8															
0.7						1									1
0.6						1									1
0.5															
0.4															
0.2															
LESS															
TOTAL						2									2

TABLE XXVIII, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY, ALT. LESS, WGT. LESS																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3					1											1
1.2	2	1	1				1			1	1	1		1		9
0.8																
0.7	1							2	1	1	2	1				8
0.6																
0.5																
0.4																
0.2																
LESS																
TOTAL	3	1	1		1		1	2	1	2	3	2		1		18
TIME	95.0	5.3	5.0	9.1	8.1	6.0	3.6	9.0	8.9	9.6	6.6	7.7	1.9	0.2	0.	176.2

TABLE XXIX
Maneuver n_z Versus μ by Mission Segment
by Altitude by $\frac{C_T}{\sigma}$

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT, ALT. LESS, CT/S LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3		1							1
1.2		1							1
0.8									
0.7					2				2
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL		2			2				4

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT, ALT. LESS, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5						1			1
1.4	1								1
1.3		1			1				2
1.2	1	2	1		1				5
0.8									
0.7		1	1	1	1	3			7
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL	2	4	2	1	1	5	1		16

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT, ALT. LESS, CT/S 0.09									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3		1	1					2	
1.2			1		2			3	
0.8									
0.7		1	1			1		3	
0.6				1				1	
0.5									
0.4									
0.2									
LESS									
TOTAL		2	3	1	2	1		9	

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT, ALT. 1000, CT/S LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2		3	1	1		2		7	
0.8									
0.7						3		3	
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL		3	1	1		5		10	

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT, ALT. 1000, CT/S 0.06								
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30 TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4		1						1
1.3			1	1				2
1.2		4	1	2	2	1		10
0.8								
0.7	2				3	2		7
0.6						1		1
0.5								
0.4								
0.2								
LESS								
TOTAL	2	5	2	3	5	4		21

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT, ALT. 1000, CT/S 0.09								
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30 TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2				2	2	1		5
0.8								
0.7			1		1			2
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL			1	2	3	1		7

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT, ALT. 2000, CT/S LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3			1					1	
1.2	1	1	1					3	
0.8									
0.7			1	1				2	
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL	1	2	2	1				6	

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT, ALT. 2000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5					1			1	
1.4	1							1	
1.3	1					1		2	
1.2	4	2	2	4	5			17	
0.8									
0.7	1		3	8	16			28	
0.6			2					2	
0.5						1		1	
0.4									
0.2									
LESS									
TOTAL	7	2	7	12	22	2		52	

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT, ALT. 2000, CT/S 0.09								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2			1					1
0.8								
0.7			1					1
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL			2					2

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT, ALT. 5000, CT/S 0.06								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2								
0.8								
0.7					1			1
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL					1			1

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. MANUVR, ALT. LESS, CT/S 0.06								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3	1		1					2
1.2	1		2	3				6
0.8								
0.7			2	3	3	1		9
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL	2		5	6	3	1		17

NZ MANEUVERS VS MU BY MISS. SEG. MANUVR, ALT. LESS, CT/S 0.09								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2								
0.8								
0.7								
0.6						1		1
0.5								
0.4								
0.2								
LESS								
TOTAL					1			1

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. MANUVR, ALT. 1000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4			1					1	
1.3	1		2		1	1		5	
1.2			1	2	4			7	
0.8									
0.7		1		1	1	2	1	6	
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL	1	1	4	3	6	3	1	19	

NZ MANEUVERS VS MU BY MISS. SEG. MANUVR, ALT. 1000, CT/S 0.09									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4	1							1	
1.3		1						1	
1.2									
0.8									
0.7									
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL	1	1						2	

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. MANUVR, ALT. 2000, CT/S 0.06								
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30 TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5							2	2
1.4					1	2		3
1.3		1	2	1	4	1		9
1.2	1	1	1	6	19	12		40
0.8								
0.7			3		4	2	4	13
0.6	2			1	4			7
0.5								
0.4								
0.2								
LESS								
TOTAL	3	2	6	8	32	17	6	74

NZ MANEUVERS VS MU BY MISS. SEG. MANUVR, ALT. 5000, CT/S 0.06								
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30 TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2								
0.8								
0.7			1					1
0.6				2				2
0.5								
0.4								
0.2								
LESS								
TOTAL			1	2				3

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. DESCNT, ALT. LESS, CT/S LESS								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2			2	3				5
0.8								
0.7			1			1		2
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL			3	3		1		7

NZ MANEUVERS VS MU BY MISS. SEG. DESCNT, ALT. LESS, CT/S 0.06								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2		1	1	4	2			8
0.8								
0.7		1	1	2	3			7
0.6					1			1
0.5								
0.4								
0.2								
LESS								
TOTAL		2	2	6	6			16

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SFG. DESCNT, ALT. 1000, CT/S 0.09								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3				1				1
1.2			4	4				8
0.8								
0.7				3	3			6
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL			4	8	3			15

NZ MANEUVERS VS MU BY MISS. SEG. DESCNT, ALT. 2000, CT/S LESS								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2				1	3	1		5
0.8								
0.7		1		1	5	1		8
0.6					1			1
0.5								
0.4								
0.2								
LESS								
TOTAL	1			2	9	2		14

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. DESCNT, ALT. 2000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3	1		1	1				3	
1.2	2	1	1	15	10	2		31	
0.8									
0.7	1	1		17	10	2		31	
0.6				4	5			9	
0.5				1				1	
0.4									
0.2									
LESS									
TOTAL	4	2	2	38	25	4		75	

NZ MANEUVERS VS MU BY MISS. SEG. DESCNT, ALT. 2000, CT/S 0.09									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3			1	1				2	
1.2			2	3				5	
0.8									
0.7				1				1	
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL			3	5				8	

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. DESCNT, ALT. 1000, CT/S LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2			1	1	5	1		8	
0.8									
0.7	1				6	3	1	11	
0.6						2		2	
0.5									
0.4									
0.2									
LESS									
TOTAL	1	1	1	11	6	1		21	

NZ MANEUVERS VS MU BY MISS. SEG. DESCNT, ALT. 1000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3	1							1	
1.2		2	3	3	13	8		29	
0.8									
0.7	2	1	1	1	8	4	1	18	
0.6					3		1	4	
0.5									
0.4									
0.2									
LESS									
TOTAL	3	3	4	4	24	12	2	52	

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. DESCNT, ALT. 5000, CT/S 0.09								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2								
0.8								
0.7				1				1
0.6				2				2
0.5								
0.4								
0.2								
LESS								
TOTAL				3				3

NZ MANEUVERS VS MU BY MISS. SEG. STEADY, ALT. LESS, CT/S LESS								
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4								
2.2								
2.0								
1.8								
1.7								
1.6								
1.5								
1.4								
1.3								
1.2	1	1		1	2	1		6
0.8								
0.7					6	1		7
0.6								
0.5								
0.4								
0.2								
LESS								
TOTAL	1	1		1	8	2		13
TIME	3.4	67.9	14.6	3.9	12.7	24.7	10.0	0. 137.3

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. STEADY, ALT. LESS, CT/S 0.06									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3					2	3			5
1.2		5	1	3	11	18	3		41
0.8									
0.7	1	6	1		8	17			35
0.6						2			2
0.5									
0.4									
0.2									
LESS									
TOTAL	1	11	2	3	21	42	3		83
TIME	5.5	279.7	47.1	47.0	172.0	192.3	101.3	0.8	845.8

NZ MANEUVERS VS MU BY MISS. SEG. STEADY, ALT. LESS, CT/S 0.09									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2				1	3	1	1		6
0.8									
0.7					2				2
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL				1	5	1	1		8
TIME	0.5	36.8	2.9	7.5	45.8	27.1	32.0	0.	152.6

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. STEADY, ALT. 1000, CT/S LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3					1				1
1.2			1	8	6				15
0.8									
0.7				5	5				10
0.6						1			1
0.5									
0.4									
0.2									
LESS									
TOTAL			1	13	12	1			27
TIME	0.8	14.7	9.1	8.7	51.8	51.7	2.2	0.	138.9

NZ MANEUVERS VS MU BY MISS. SEG. STEADY, ALT. 2000, CT/S LESS									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2				1	2				3
0.8									
0.7				1	4	1			6
0.6						1			1
0.5									
0.4									
0.2									
LESS									
TOTAL				2	6	2			10
TIME	0.	9.0	1.5	1.4	9.0	46.1	8.5	1.4	76.9

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. STEADY, ALT. 2000, CT/S 0.06									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4		1							1
1.3					2	2	4		8
1.2		4	1	3	25	62	28	1	124
0.8									
0.7	1	5	2	3	17	47	17	2	94
0.6				1	2	10	3		16
0.5					1	1			2
0.4		1							1
0.2									
LESS									
TOTAL	1	11	3	7	47	122	52	3	246
TIME	22.8	274.6	43.4	37.3	309.3	687.3	227.3	4.8	1606.9

NZ MANEUVERS VS MU BY MISS. SEG. STEADY, ALT. 2000, CT/S 0.09									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3									
1.2					3	15			18
0.8									
0.7		1	2		8	7	1		19
0.6						1			1
0.5									
0.4									
0.2									
LESS									
TOTAL		1	2		11	23	1		38
TIME	0.	51.0	14.9	19.9	125.0	309.1	90.6	0.	610.5

TABLE XXIX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. STEADY, ALT. 1000, CT/S 0.06									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4					3	1		4	
1.3	3				3			6	
1.2	8	3	2	15	25	8		61	
0.8									
0.7	8	1	4	7	18	6		44	
0.6	2			1	2	2		7	
0.5					1			1	
0.4									
0.2									
LESS									
TOTAL	21	4	6	23	52	17		123	
TIME	9.8	295.6	37.6	55.5	217.8	271.9	205.9	0.	1094.2

NZ MANEUVERS VS MU BY MISS. SEG. STEADY, ALT. 1000, CT/S 0.09									
LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL	
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3					1			1	
1.2			1	7	4			12	
0.8									
0.7	2			3	4			9	
0.6									
0.5									
0.4									
0.2									
LESS									
TOTAL	2		1	10	9			22	
TIME	2.0	72.5	13.6	17.4	69.9	159.4	25.1	0.	359.8

TABLE XXX
Maneuver n_z Versus μ by
Mission Segment

NZ MANEUVERS VS MU BY MISS. SEG. ASCENT									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5						1	1		2
1.4	1	2							3
1.3		4	3	1		1	1		10
1.2	1	15	7	9	10	10			52
0.8									
0.7	2	3	3	6	14	28			56
0.6				3		1			4
0.5							1		1
0.4									
0.2									
LESS									
TOTAL	4	24	13	19	24	41	3		128

NZ MANEUVERS VS MU BY MISS. SEG. MANUVR									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5							2		2
1.4	1		1		1	2			5
1.3	1	3	4	2	5	2			17
1.2	1	2	2	10	26	12			53
0.8									
0.7		1	4	3	8	7	4		29
0.6	2			3	4	1			10
0.5									
0.4									
0.2									
LESS									
TOTAL	5	6	11	18	44	24	8		116

TABLE XXX, contd.

NZ MANEUVERS VS MU BY MISS. SEG. DESCNT									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4									
1.3	1	1		2	4				8
1.2	1	5	6	14	50	24	3		103
0.8									
0.7	2	5	3	4	40	28	6		88
0.6					9	9	1		19
0.5					1				1
0.4									
0.2									
LESS									
TOTAL	4	11	9	20	104	61	10		219

NZ MANEUVERS VS MU BY MISS. SEG. STEADY									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5									
1.4		1				3	1		5
1.3		3			4	10	4		21
1.2		18	6	11	74	135	41	1	286
0.8									
0.7	2	22	6	7	51	110	26	2	226
0.6		2		1	3	15	7		28
0.5					1	2			3
0.4		1							1
0.2									
LESS									
TOTAL	2	47	12	19	133	275	79	3	570
TIME	44.9	1102.0	184.7	198.8	1029.0	1858.4	781.6	7.1	5206.4

TABLE XXXI
Maneuver n_z Versus Airspeed
by Mission Segment

NZ MANEUVERS VS VEL. BY MISS. SEG. ASCENT																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4	3								1				1		2	
1.3	7	1							1			1			3	
1.2	23	8	3	1	2	3	4	4	1	2		1			10	
0.8																
0.7	8	4	3	4	3	4	4	13	4	7	1	1			56	
0.6		2	1					1							4	
0.5												1			1	
0.4																
0.2																
LESS																
TOTAL	41	15	7	5	5	7	8	17	8	9	1	2	2	1	128	

NZ MANEUVERS VS VEL. BY MISS. SEG. MANUVR																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4	2						1				2				2	
1.3	8	1	1		2	2	1		1	1					5	
1.2	5	6	4	5	7	7	6	9	2	1	1				17	
0.8																
0.7	5	3			1	3	4	4	1	2	1		3	2	29	
0.6	2	3		1	2	1			1						10	
0.5																
0.4																
0.2																
LESS																
TOTAL	22	13	5	6	12	13	12	13	5	4	4	2	3	2	116	

NZ MANEUVERS VS VEL. BY MISS. SEG. STEADY																
LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL	
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4	1						2	1			1				5	
1.3	3				1	1	1	3	2	4	2				21	
1.2	24	8	4	12	12	22	30	35	31	34	31	25	6	10	2	286
0.8																
0.7	30	7	1	6	14	18	16	20	25	40	18	15	7	6	3	226
0.6	2	1			1	1	2	3	2	4	6	3	1	1	1	28
0.5							1		1		1					3
0.4	1															1
0.2																
LESS																
TOTAL	61	16	5	18	28	42	51	61	63	80	60	46	14	19	6	570

TIME	1326.1	133.5	122.0	153.4	206.4	296.7	372.5	550.4	487.7	425.3	412.7	433.7	217.1	45.6	22.8	5206.4
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TABLE XXXI, contd.

NZ MANEUVERS VS VEL. BY MISS. SEG. DESCNT																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3																
1.2	2	1	1		1		3									8
1.1	12	11	6	7	12	17	14	6	9	5	1		1	1	1	103
0.8																
0.7	10	4	1	4	7	17	14	9	8	5	3	2	3		1	88
0.6					2	4	3	5	2	1	2					19
0.5					1											1
0.4																
0.2																
LESS																
TOTAL	24	16	8	11	23	38	34	20	19	11	6	2	4	1	2	219

TABLE XXXII									
Maneuver n_z Versus μ									
NZ MANEUVERS VS MU COMPOSITE									
	LESS	0.00	0.05	0.10	0.15	0.20	0.25	0.30	TOTAL
2.4									
2.2									
2.0									
1.8									
1.7									
1.6									
1.5						1	3		4
1.4	2	3	1		1	5	1		13
1.3	2	11	7	5	13	13	5		56
1.2	3	40	21	44	160	181	44	1	494
0.8									
0.7	6	31	16	20	113	173	38	2	399
0.6	2	2		7	16	26	8		61
0.5					2	2	1		5
0.4		1							1
0.2									
LESS									
TOTAL	15	88	45	76	305	401	100	3	1033

TABLE XXXIII																
Maneuver n_z Versus Airspeed																
NZ MANEUVERS VS VELOCITY COMPOSITE																
	LESS	40	60	65	70	75	80	85	90	95	100	105	110	115	120	TOTAL
2.4																
2.2																
2.0																
1.8																
1.7																
1.6																
1.5																
1.4																
1.3	6	3	2		4	3	6	2	1	1	2	1		1		4
1.2	20	33	17	25	33	49	54	54	43	42	33	26	7	11	3	56
0.8	64	33	17	25	33	49	54	54	43	42	33	26	7	11	3	494
0.7	53	18	5	14	25	42	38	46	38	54	23	18	13	8	4	399
0.6	4	6	1	1	5	6	5	8	6	5	8	3	1	1	1	61
0.5					1		1		1		1					5
0.4	1															1
0.2																
LESS																
TOTAL	148	80	25	40	68	100	105	111	95	104	71	52	23	23	8	1033

Unclassified

Security Classification

DOCUMENT CONTROL DATA - R&D		
(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)		
1 ORIGINATING ACTIVITY (Corporate author)		2a. REPORT SECURITY CLASSIFICATION
U. S. Army Aviation Materiel Laboratories Fort Eustis, Virginia		Unclassified
		2b. GROUP
3. REPORT TITLE		
CH-54A Skycrane Helicopter Flight Loads Investigation Program		
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)		
Engineering Laboratory Report		
5. AUTHOR(S) (Last name, first name, initial)		
Braun, Joseph F. Giessler, F. Joseph		Chestnutt, David Bartek, Louis R.
6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
June 1966	183	
8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)	
b. PROJECT NO. 1P125901A14607 c. House Task EL 65-15 d.	USAAVLABS Technical Report 66-58	
	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
10. AVAILABILITY/LIMITATION NOTICES		
Distribution of this document is unlimited.		
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY
		US Army Aviation Materiel Laboratories Fort Eustis, Virginia
13. ABSTRACT		
<p>The United States Army Aviation Materiel Laboratories, Fort Eustis, Virginia, has conducted a flight loads investigation program for several operational aircraft. The aircraft involved in the program were the OV-1A, CH-47A, UH-1B, and CH-54A. This report deals only with the analysis of the 110.4 hours of CH-54A Skycrane data. Century 409B oscillograph recorders were used to collect the parameters measured, including airspeed, altitude, vertical acceleration at center of gravity, main rotor rpm, longitudinal cyclic stick position, collective stick position, outside air temperature, torque on each engine, and gas producer rpm on each engine. Barometric pressure and takeoff-and-landing gross weight estimates were also recorded as supplemental information. The flight data were divided into four categories by mission: ascent, maneuver, descent, and steady state. The aircraft were performing their normal mission functions during the period in which the data were collected.</p> <p>Time history tables, histograms, peak counts, and exceedance curves were generated from the data. As a result of this study, designers now have a limited sample of conditions experienced by four CH-54A aircraft in the field.</p>		

14. KEY WORDS	LINK A		LINK B		LINK C	
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